Cultural Intelligence in Thailand: An Examination of its Antecedents and Consequence

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Abstract

In the 21st century, the number of employees working abroad is expected to increase. The international education industry is growing dramatically in Asia, and in Thailand in particular. Three to five new international educational institutions are established in Thailand every year. In the Thai community, teachers perform several important roles, including teaching and serving as role models. Human Resource Development can play a key role in supporting overseas teachers, by providing them with the skills necessary to succeed in their overseas assignments, as well as in assisting international educational institutions, by designing training and development programs aimed at enhancing oversea teachers' work performance and organizational citizenship behaviors.

Cultural intelligence (CQ) is one of the most successful development factors that can be employed for expatriate adjustment and performance in cross-cultural settings. Very little research has examined the association between different antecedents and intercultural outcomes through CQ from a holistic perspective. Specifically, the antecedents of CQ are usually considered a multidimensional construct. The purpose of this study was to examine the relationships among CQ's antecedents (i.e., cross-cultural experience (CCE), general cross-cultural training (CCT), Thai CCT, and openness to experience) and CQ's consequence (i.e., expatriate performance) within a sample of overseas teachers employed in international educational institutions in Thailand. Cultural intelligence was considered a mediating variable between CCE and expatriate performance, as well as between CCTs and expatriate performance. A personality trait –

openness to experience – was considered a moderating variable between CCE and CQ, as well as between CCTs and CQ. Further, the effect of CQ-employed mindfulness was examined to see if mindfulness could explain additional variance in expatriate performance above and beyond the original components of CQ. Path analysis was primarily conducted to examine the sequences of relationships among the variables in the present study. A qualitative analysis was also conducted to better understand the learning of Thai culture from the actual experiences of overseas teachers in Thailand.

Results showed that the variables used in this study are related to and contribute significantly to explaining expatriate performance. The overall fit of the proposed models that use CQ-employed mindfulness as a mediator variable is better than the overall fit of the proposed models that use CQ-only as a mediator variable. Regarding the specific hypotheses on the number of times for CCTs and the most recent of CCTs, similar patterns were found in the models. However, the pattern was not found in models that used the numbers of days for CCTs. First, overseas teachers with high openness to experience scores reported high CQ scores. There was also an interaction effect between CCE and openness to experience on CQ. Further, the overseas teachers with high CQ scores reported high expatriate performance scores. In addition, more general CCT days directly predicted higher CQ in both the proposed model that uses CQ-only as a mediator variable and the proposed model that uses CQ-employed mindfulness as a mediator variable. However, the significant indirect effect of general CCT to predict expatriate performance through CQ was found only on the proposed model that uses CQ-only as a mediator variable, but not on the proposed model that uses CQ-employed mindfulness as

a mediator variable. Lastly, four major themes describing the learning of Thai culture emerged, including: (a) seeking various effective interactions; (b) searching for other sources to learn more about Thai culture; (c) realizing the benefits of learning and understanding Thai culture; and (d) recognizing barriers to learning about Thai culture. This study concludes by discussing implications for research and practice, the limitations of the study, and recommendations for future research.

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CHAPTER 1

INTRODUCTION

This first chapter introduces cultural intelligence, the background for this study, and the problem statement supporting the study. This chapter also provides the purposes of the study and research questions, which are followed by the research hypotheses and hypothesized model of the study. Lastly, this chapter discusses the significance of the study and the definitions of key terms.

Background to the Problem

In today's globalized world, interactions among people from different regions happen almost in every corner of the world. Products are being manufactured in different economic regions or countries than where they are sold (Budworth & DeGama, 2012). Companies are increasingly trying to access international markets to sell their products and services (Barefoot & Mataloni, 2011), and the number of expatriates is increasingly growing (Brookfield Global Relocation Services, 2015). Changes in the languages, traditions, and cultures of clients, customers, colleagues, and stakeholders have given rise to the importance of individuals' ability to adjust themselves in contemporary business situations. An individual's capability for adapting effectively to cross-cultural diversity is essential (Budworth & DeGama, 2012). In fact, there are many consequences associated with cross-cultural adaptation, including employees' international work accomplishments and family well-being. Accordingly, there is a need for research that informs organizations and employees about how to prepare people for international interactions and increase the likelihood of success with intercultural assignments. Hite and McDonald

(2010) described an obligation for Human Resource Development (HRD) researchers and practitioners to support individuals and organizations in this new globalized trend. Preparing individuals to be able to work in different cultural settings is pivotal (Hite & McDonald, 2010).

One of the most successful development factors that can be employed for expatriate adjustment and performance is cultural intelligence (CQ), which Earley and Ang (2003) defined as "a person's capability to adapt effectively to new cultural contexts" (p. 59). Specifically, CQ has been designed to facilitate employees' "work within a range of cultures" rather than with specific cultures (Budworth & DeGama, 2012, p. 331). Consequently, CQ may support individuals in developing cross-cultural cognition, motivation, and skills in the areas of learning. Thus, they can perform effectively in today's globalized economy, including cultures other than their own; their own culture when they encounter people from different backgrounds; and also in diverse work teams.

Problem Statement

Cultural intelligence is becoming more and more important due to the increasing interactions among people with different cultural backgrounds in today's globalized world (Budworth & DeGama, 2012; Friedman, 2005; Thomas & Inkson, 2009; Triandis, 2006). Ball, Geringer, Minor, and McNett (2010) indicated that the number of employees working abroad within medium-sized and large-sized businesses is expected to increase in the 21st century. Brookfield Global Relocation Services (2015) conducted a survey of global mobility professionals representing 143 companies and found that 88 percent of

respondents expected their international assignment number to increase or remain the same. Mercer (2015a) also conducted a worldwide survey of international assignments with 831 multinational companies and reported that more than half of the companies increased their international assignments by 51 percent for short-term appointments, 43 percent for long-term appointments, and 50 percent for permanent appointments. In addition, 85 percent of the multinational companies have established their policies for international assignments.

The international education industry is one of many industries that have been significantly influenced by globalization. In Asia, the international education industry is growing dramatically due to an increase in the middle class population and the demand for international education services (Bates, 2010), including in Thailand. In particular, Kasikorn Research Center reported that three to five new international educational institutions are established every year in Thailand (Prachachat, 2013). There is an approximately 10 percent increase per year in the number of students enrolled in international educational institutions in Thailand. In 2012, there were 39, 212 students enrolled in international schools in Thailand, and there were 43,133 students enrolled in the following year (Prachachat, 2013).

Unlike expatriate employees in corporate settings, teachers usually choose to apply to work abroad based on their self interest but not by requests from their organizations (Ramis & Krastina, 2010). Overseas teachers need to develop their capability to interact with international students, parents, and colleagues. Cultural intelligence has been introduced as a developmental factor that can be employed for

overseas teachers' adjustment and performance (Ramis & Krastina, 2010). Teachers in culturally heterogeneuos classes need to develop CQ in order to "have a better understanding of their students and to teach them more effectively" (Petrovic, 2011, p. 277). In addition, teachers have a responsibility to develop cultural understanding and a global perspective of their students in order to interact effectively in global and diverse work settings (Cushner & Mahon, 2002; Griffer & Perlis, 2007; Lee, 2009). Watkins and Noble (2016) mentioned that, besides teaching knowledge, intellectual knowledge is very necessary. The ability to understand and teach students who are from different cultural backgrounds and the ability to act properly in multicultural settings could help teachers to work effectively (Ramis & Krastina, 2010; Watkins & Noble, 2016). Specifically, the concept of CQ emphasizes teachers' cognition, metacognition, behavior, and motivation.

Specifically, in the Thai culture, the Thai word *kru* (ครู/teacher) is defined as a person who provides knowledge to others and guides others. Teacher is also defined as *mæ phimph khxng chati* (แม่พิมพ์ของชาติ/a paradigmatic self). Princess Maha Chakri Sirindhorn (1983) gave a speech to new graduates in teacher training colleges, emphasizing that being a teacher is very important, because teachers play a significant role in building the country through youth development.Teachers have a responsibility to not only teach, but also be a paradigmatic self to others (Chotikphnich, 2011). Further, teacher is one of few occupations in Thailand that Thai put the word *khun* in front of the occupation name *khun kru*. The word *khun* in the Thai language is usually used to call a person in order to show respect. In Thai, *khun* also means merit, goodness, and value. Accordingly, teachers play an important role in the Thai community. This honor is also projected to the overseas

teacher in Thailand where there is an increasing demand of international education services.

While demand for the number of employees working abroad is increasing, international assignments' failure rates remain high (Cole, 2011; Mercer, 2015b). International assignment failure is defined as employees underperforming in international assignments or returning to home countries prematurely (Cole, 2011; Hofstede, 2001). Maurer (2013) reported that, on average, just 58 percent of international assignments were considered to be successful by their organizations. Success rates vary across regions and countries, with Europe, the Middle East, and Africa reporting 63 percent of executives completing assignments abroad, the Americas reporting 57 percent, and the Asia-Pacific region reporting 54 percent.

The cost of these unsuccessful international assignments is considered high (Dowling, Festing, & Engle, 2008; McNulty & Tharenou, 2004). There are two types of these costs, direct and indirect. Direct costs are salary, training, airfare and relocation expenses, and compensation for replacement costs (Dowling et al., 2008). Indirect costs include lowered international customer service standards, damaged supplier and customer relationships, and lost customers and market share. These indirect costs affect an organization's overall approach to expatriate staffing, decrease staff morale in the international operations, and create difficulties with host governments (Dowling et al., 2008). They also are harder to estimate when compared with direct costs. Unsuccessful international assignments could have enormous emotional and psychological impacts on employees and their families (Dowling et al., 2008).

Consequently, there is a need for research studies that can inform organizations and employees on how to prepare people for international interactions and increase the likelihood of success of intercultural assignments (Cole, 2011). Human Resource Development can play a key role in supporting individuals and organizations in effectively adjusting to this important workplace trend (Hite & McDonald, 2010). Cultural intelligence is considered one of the most successful development factors that can be employed for intercultural assignments. Cultural intelligence has been found to be associated with various intercultural assignment outcomes such as cultural adjustment and adaptation (Ang et al., 2007; Budworth & DeGama, 2012; Dagher, 2010; Groves & Feyerherm, 2011; Kim, Kirkman, & Chen, 2006; Lee & Sukoco, 2010; Lin, Chen, & Song, 2012; Moon, Choi, & Jung, 2012; Templer, Tay, & Chandrasekar, 2006; Wu & Ang, 2011), culture judgment and decision making (Ang et al., 2007; Imai & Gelfand, 2010), and performance (Ang et al., 2007; Chen, Lin, & Sawangpattanakul, 2011; Groves & Feyerherm, 2011; Wu & Ang, 2011). In addition, CQ has been recognized as a mediator between various individual and organizational factors (e.g., individual traits, individual international experience, and pre-departure training) and the intercultural assignment outcomes (Engle & Crowne, 2014; MacNab, Brislin, & Worthley, 2012; Moon et al., 2012).

Although numerous studies have revealed the importance of CQ, very little research has examined the association between different antecedents and intercultural outcomes through CQ from a holistic perspective. Specifically, the antecedents of CQ are usually considered a multidimensional construct (Takeuchi, Tesluk, Yun, & Lepak,

2005). For example, there are many dimensions or aspects that define cross-cultural experience such as experience working outside of individuals' own country, and experience working in intercultural settings. Similarly, there are many important facets under cross-cultural training such as the number and length of the training. Accordingly, although cross-cultural studies on CQ have been conducted, better understanding the nature of different dimensions used in the CQ's antecedents is essential. Moreover, research on CQ and its related variables has not been conducted in Thailand. This study addresses this gap by examining how overseas teachers develop their abilities to interact and perform effectively in a non-Western context.

Purpose of the Study

The purpose of this study was to examine the relationships among CQ's antecedents (i.e., cross-cultural experience (CCE), cross-cultural trainings (CCTs) in Thai-culture-specific training and in general cross-cultural training, and openness to experience) and CQ's consequence (i.e., expatriate performance) within a sample of overseas teachers employed in international educational institutions in Thailand, including kindergartens, elementary schools, high schools, universities, colleges, and language institutes. Path analysis was primarily conducted to examine the sequences of relationships among the variables in the present study. The proposed sequences of relationships among the variables in the present study were as follows. Cultural intelligence was considered a mediating variable between CCE and expatriate performance, as well as between CCTs and expatriate performance. A personality trait –

openness to experience – was considered a moderating variable between CCE and CQ, as well as between CCTs and CQ.

Research Questions

In order to examine the relationships among the proposed variables using a sample of overseas teachers employed in international educational institutions in Thailand, the following research questions were developed:

1. Is there a difference in the effect of CQ when including mindfulness as one factor in the construct of CQ?
2. What are the effects of CCE and CCTs on CQ?
3. What is the effect of CQ on expatriate performance?
4. How does openness to experience moderate the relationships between CCE and CQ, as well as CCTs and CQ?

Research Hypotheses

Based on the above research questions and the purpose of this study, the following hypotheses were explored.

Hypothesis 1: Mindfulness will account for additional variance in expatriate performance above and beyond the original four sub-components of CQ.

Hypothesis 2: Cross-cultural experience (CCE)

Hypothesis 2a: CCE will be positively related to CQ.

Hypothesis 2b: CQ will mediate the relationship between CCE and expatriate performance.

Hypothesis 3: Cross-cultural training (CCT)

Hypothesis 3ai: Thai CCT will be related to CQ.

Hypothesis 3bi: CQ will mediate the relationship between Thai CCT and expatriate performance.

Hypothesis 3aii: General CCT will be related to CQ.

Hypothesis 3bii: CQ will mediate the relationship between general CCT and expatriate performance.

Hypothesis 4: Openness to experience

Hypothesis 4a: Openness to experience will be positively related to CQ.

Hypothesis 4b: Openness to experience will moderate the relationship between CCE and CQ.

Hypothesis 4ci: Openness to experience will moderate the relationship between Thai CCT and CQ.

Hypothesis 4cii: Openness to experience will moderate the relationship between general CCT and CQ.

Hypothesis 5: CQ will be positively related to expatriate performance.

According to these research hypotheses, I proposed the following research model of CQ. See Figure 1.1.

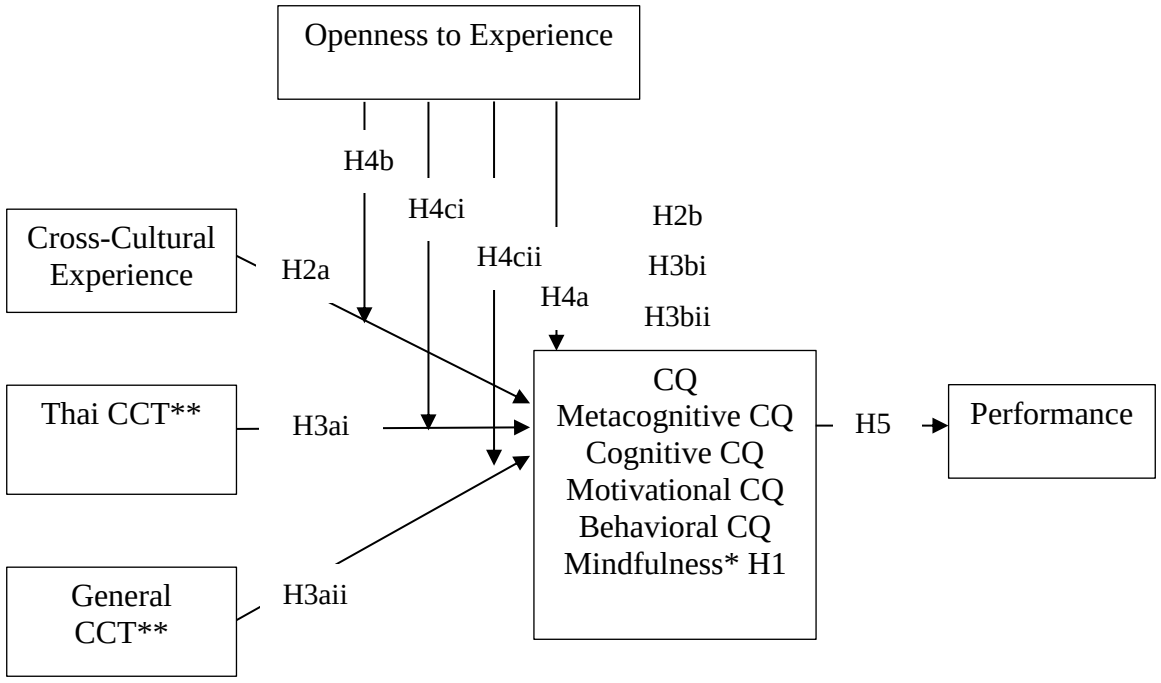

Figure 1.1. Hypothesized model of cultural intelligence as a mediator variable predicting the variable of expatriate performance.

Note. ***** The effect of CQ employed-mindfulness was examined in the separate models.
** Three different dimensions of both Thai and general CCTs were individually examined: (a) the total number of times for trainings, (b) the total number of days for trainings, and (c) the most recent of trainings.

In this study, I did not include all dimensions of CCTs – number of times, number of days, and the most recent CCT – in the same model. It could be that all CCTs contribute to explaining CQ, and it could be that three variables may interact among others in explaining CQ and performance. As a result, there are six hypothesized models in this study.

1. Model of CQ using the total number of times for CCTs.
2. Model of CQ-employed mindfulness using the total number of times for CCTs.
3. Model of CQ using the total number of days for CCTs.
4. Model of CQ-employed mindfulness using the total number of days for CCTs.

5. Model of CQ using the most recent of CCTs.
6. Model of CQ-employed mindfulness using the most recent of CCTs.

Significance of the Study

This study aims to make a significant contribution in at least three different ways. First, CQ provides a holistic view of different abilities that lead individuals to be effective in new cultures. Earley and Ang's (2003) concept of CQ includes four main aspects: motivation, cognition, metacognition, and behavior. Specifically, overseas teachers are unlike expatriate employees in corporate settings in that they usually choose to apply to work abroad based on their self-interest. The concept of CQ helps to describe not only individuals' interest or motivation to teach overseas but also individuals' behaviors and cognition.

Second, this study examines CQ by combining different approaches and also examines research variables that have been inadequately studied in the CQ literature. Cross-cultural experience, CCTs, and openness to experience were examined for how they relate to overseas teachers' performance. In addition to contributing to the current literature on international education industry and cross-cultural adaptation, this study will also provide information on the potential of CQ to increase overseas teachers' success in intercultural assignments. Specifically, teachers take responsibility both for accomplishing high performance in providing quality knowledge to their students and for being a paradigmatic self to their students, which may affect international educational institutions and society as a whole.

Finally, this study provides an understanding of how overseas teachers adjust effectively in a non-Western context. Usually, research on cross-cultural adaptation is limited to Western countries and large economies in Asia (e.g., China and South Korea). Specifically, this study was conducted in Thailand, which has been considered a logistic hub for the ASEAN Economic Community (AEC) since 2015. This study presents some insight for international educational institutions in a non-Western context on how to apply CQ and its related variables to support their overseas teachers across cultures.

Definitions of Key Terms

The following terms and definitions were used in this study. A brief description of each term is also provided.

Cultural intelligence (CQ). "A person's capability to adapt effectively to new cultural contexts" (Earley & Ang, 2003, p. 59). Earley and Ang's (2003) concept of CQ includes four aspects: metacognition, cognition, motivation, and behavior. Earley and Ang developed the term CQ based on the Nature of Intelligence theory proposed by Sternberg and Detterman (1986).

Cultural intelligence-employed mindfulness (CQ-employed mindfulness). "The capability to deal effectively with people from different cultural backgrounds" (Thomas, 2006, p. 78). Thomas and Inkson's (2004) model of CQ includes three components: knowledge, mindfulness, and skills. The ability to be actively attentive is known to be important to advance individuals' knowledge and behavior-skills in different cultural settings. This CQ-employed mindfulness was developed based on a system of

interacting abilities in intelligence theory (Sternberg, 1997; Sternberg & Detterman, 1986).

Cross-cultural experience (CCE). Individuals' international experience in working outside of their own country. This definition was developed based on the past-current-working dimension of international experience established by Takeuchi et al. (2005). Participants were asked to provide information on the total duration in years that they have spent working outside of their own country.

Cross-cultural training (CCT). A program officially designed for individuals to interact effectively in cross-cultural settings (Brislin & Yoshida, 1994). The total number of times, duration in days, and the most recent participation in Thai-culture-specific trainings and in general cross-cultural trainings were measured. The conception of the Thai-culture-specific training and the general cross-cultural training were developed based on training within specific cultures versus training across a range of cultures (Gudykunst, Guzley, & Hammer, 1996). Both the Thai-culture-specific training and the general cross-cultural training were designed to support individuals in adapting effectively in cross-cultural settings. Accordingly, in this dissertation Thai-culture-specific training was abbreviated to be Thai CCT, and general cross-cultural training was abbreviated to be general CCT.

Openness to experience. Personality trait of being imaginative and preferring variety (McCrae & Costa, 2008). Openness to experience was considered an important personality characteristic for individuals to work effectively in cross-cultural settings. It is a dimension of the Big Five personality traits.

Expatriate performance. "The accomplishment of goals and meeting objectives" and "establishing and maintaining relationships and effectively interacting with coworkers, supervisor, and so on" (Thomas & Lazarova, 2006, p. 255). Thomas and Lazarova (2006) defined expatriates' performance based on two facets: the task-based aspect of performance and the relationship-based aspect of performance.

Summary

In this chapter, an introduction to the study was provided. In particular, the background to the problem and the problem statement were discussed. To recap, the number of employees working abroad is expected to increase, particularly in the international education industry. The purpose of this study was to examine the relationships among CQ and its related variables within a sample of overseas teachers employed in international educational institutions in Thailand. The research questions, the research hypotheses, and the hypothesized model were also provided in this first chapter. Lastly, the significance of the study together with the definitions of key terms was also discussed. In Chapter 2, the review of the literature on CQ and key variables used in this study will be presented.

CHAPTER 2

LITERATURE REVIEW

This chapter presents an in-depth review of the literature relevant to the theoretical framework, conceptual model, and research hypotheses of this study. This review includes a description of various attempts to define the constructs of CQ and differentiate the construct from other related concepts, specifically cultural competence, emotional intelligence, and social intelligence. The three main streams of the literature on CQ are reviewed: (a) Earley and Ang's concept of CQ, (b) Thomas's concept of attentive and reflective CQ, and (c) Peterson's multiple intelligences of CQ. Then, a literature review of the proposed antecedents and consequence of CQ and the hypothesized model of CQ will be presented.

Cultural Intelligence: Background and Definitions

The concept of CQ has been popular in international business and organization research and practice since the early 2000's. In the field of HRD, CQ research has usually focused on how individual and organizational factors affect CQ. Cultural Intelligence has been considered a mediator between individual and organizational antecedents (e.g., different psychological constructs, individual cross-cultural experiences, pre-departure trainings) and overseas assignment outcomes (e.g., cultural adjustment and adaptation, performance) (Budworth & DeGama, 2012; Engle & Crowne, 2014; MacNab et al., 2012; Moon et al., 2012).

Earley and Ang (2003) were among the first scholars to propose the term CQ. They developed the term CQ based on the Nature of Intelligence theory proposed by

Sternberg and Detterman (1986). There is some agreement on the meaning of CQ among scholars who conduct research in cross cultural studies. Earley and Ang (2003) described CQ as "a person's capability to adapt effectively to new cultural contexts" (p. 59). Livermore's (2011) definition of CQ is "the capability to function effectively across a variety of cultural contexts, such as ethnic, generational, and organizational cultures" (p. 3). In addition, Thomas's (2006) definition of CQ is that it is "meant to reflect the capability to deal effectively with people from different cultural backgrounds" (p. 78).

Cultural Intelligence, therefore, is not a personality trait construct that describes individuals' enduring characteristics or behaviors across time and situation (Ang et al., 2007). Cultural Intelligence is considered to be a state-like construct that describes individuals' capacity to change their abilities in different cultural settings (Ang, Rockstuhl, & Tan, 2015; Livermore, 2011). In addition, CQ is understood as a multidimensional construct, not a single ability or skills approach (Ang et al., 2007; Ang et al., 2015; Thomas & Inkson, 2004). Cultural Intelligence provides a holistic view of different abilities that lead individuals to be effective in new cultures (MacNab et al., 2012). Moreover, CQ is designed for non-culture-specific skills (Budworth & DeGama, 2012; Livermore, 2011; Ng & Earley, 2006; Thomas, 2006). That is, the capabilities expressed as CQ are supposed to be variable across different cultural settings.

Cultural Intelligence and Related Constructs

Cultural intelligence is different from other related constructs, such as cross-cultural competence, emotional intelligence, and social intelligence. Cross-cultural competence, in contrast to CQ, is defined in terms of personality traits that describe

individuals' characteristic patterns of behavior across conditions (Abbe, Gulick, & Herman, 2007; Earley & Ang, 2003; Johnson, Lenartowicz, & Apud, 2006). Emotional intelligence and social intelligence, on the other hand, are each a single ability approach. They are conceptualized as constructs with less focus on intercultural contexts (Ang et al., 2015; Earley & Ang, 2003). These three constructs are reviewed in this section.

Cross-Cultural Competence

Cross-cultural competence is defined as an individual characteristic that contributes to intercultural effectiveness, regardless of the cross-cultural circumstances (Abbe et al., 2007; Johnson et al., 2006). Earley and Ang (2003) described cross-cultural competence as the tendency of individuals to perceive and evaluate their experience in intercultural contexts. Cross-cultural competence provides culture-general capability. However, traits and other personal characteristics were found to have small and inconsistent relationships with intercultural effectiveness (Abbe et al., 2007).

Accordingly, cross-cultural competence has been adapted from its previous conceptualizations of individuals' characteristics to focus more specifically on what individuals know, do, and feel with regard to cross-cultural experiences. Cross-cultural competence includes three aspects: knowledge, affect/motivation, and skills, in which the component dimensions could be trained and shifted over time (Abbe et al., 2007; Johnson et al., 2006). Knowledge or cognition involves cultural awareness, cross-cultural schema, and cognitive complexity. Affect and motivation involve attitude and initiative, empathy, and need for closure. Lastly, skills include interpersonal skills, self-regulation, and flexibility. Hence, cross-cultural competence has been used more broadly; however, the

degree to which cross-cultural competence is developmental or directly trainable is arguable (Abbe et al., 2007). Hofstede (2011) posited that individual cross-cultural competence can be trained, but the effect of the training depends on individuals' personality factors. That means cross-cultural competence is still largely defined in terms of personality traits, whereas CQ is considered to be a state-like construct that describes individuals' abilities in different cultural settings.

Emotional Intelligence

Emotional Intelligence (EQ) is another well-known construct that has been studied in different areas of research, including research on social interaction. However, EQ is a construct with less focus on the intercultural context. Emotional Intelligence refers to abilities in cognition (or thought), emotion, and motivation (Mayer & Salovey, 1997). It describes how well individuals can understand, make a decision based on reason, and engage in their own thought (Mayer & Salovey, 1997). Furthermore, EQ includes the emotions themselves and the individuals' ability to evaluate their own mood (Mayer & Salovey, 1997). Lastly, EQ is involved in regulating biological urges or learning how to regulate their own behaviors to achieve their goals (Mayer & Salovey, 1997). In empirical research studies, EQ has been studied as a predictive or control variable. Emotional Intelligence predicts success in a range of domains, and it is mainly related to individuals' psychological well-being and social interaction, including intercultural relations (Ward, Fischer, Lam, & Hall, 2009). There have usually been significant correlations between EQ and each of the four CQ subcomponents (Groves & Feyerherm, 2011; Imai & Gelfand, 2010; Ward et al., 2009).

Social Intelligence

Cultural intelligence is also thought to be very closely associated with social intelligence (SI). Social intelligence refers to the general capability of individuals to understand others in human relations (Thorndike, 1936). Social intelligence is also a construct with less focus on intercultural context. However, cross-cultural social intelligence (CCSI) was developed as an extension of the original SI. Cross-cultural social intelligence has been defined as "the ability to understand the feelings, thoughts, and behavior of persons, including oneself, in interpersonal situations and to act appropriately upon that understanding" (Marlow, 1986, p. 52). Cross-cultural social intelligence is composed of two dimensions: (a) empathy and (b) non-ethnocentrism based on social intelligence and cross-cultural literatures (Ascalon, Schleicher, & Born, 2008). Individuals with high CCSI would therefore possess empathetic feelings and behaviors based on another person's behavior with no belief in the superiority of any cultural group. Cross-cultural intelligence differs from CCSI in that it focuses on individuals' capability to develop their metacognition, cognition, motivation, and behavior effectively in different cultural contexts, but CCSI emphasizes individuals' capability to understand another person's feelings and behaviors with no judgment.

Review of the Cultural Intelligence Literature

In this section, three main streams of literature on CQ will be discussed. The first stream is based on Earley and Ang's concept of CQ: (a) metacognitive, (b) cognitive, (c) motivational, and (d) behavioral CQ. The second stream is related to Thomas's concept

of CQ: (a) knowledge, (b) mindfulness, and (c) skills. The last stream covers the notion of multiple intelligences by Peterson.

Earley and Ang's Concept of CQ

Earley and Ang (2003) originally proposed the term CQ with three main features: (a) cognitive CQ, (b) motivational CQ, and (c) behavioral CQ. Earley and Ang (2003) explained the process in which individuals adapt effectively in varying cultural contexts based on these three main facets. However, most cultural researchers who have applied Earley and Ang's CQ concept focused on four sub-components of CQ: (a) metacognitive CQ, (b) cognitive CQ, (c) motivational CQ, and (d) behavioral CQ, instead of Earley and Ang's three general features (Ang, Van Dyne, & Koh, 2006; Ang & Inkpen, 2008; Ang, Van Dyne, & Tan, 2011; Crowne, Phatak, & Salunkhe, 2009; Engle, Dimitriadi, & Sadrieh, 2012; Moon et al., 2012). Some CQ researchers categorized metacognitive CQ and cognitive CQ together as one dimension of CQ (Earley & Peterson, 2004; Earley, Ang, & Tan, 2006) based on the similarity in these mental processes (Ang et al., 2006). In this section, the four sub-components of CQ will be explicitly explained. This way, it is easier to demonstrate how metacognitive CQ and cognitive CQ are unique and important as individual concepts.

Metacognitive CQ. The first facet of CQ, metacognitive CQ, is considered a critical starting point for developing an ability to construct a new perspective and operate in a new culture (Earley & Ang, 2003; Earley & Peterson, 2004). Earley and Ang (2003) proposed three basic questions for understanding people in a new culture. The first question is, "what are the ways that I can determine what I am like and what might

someone else be like?" (Earley & Ang, 2003, p. 93). Earley and Ang (2003) explained that this first question is used to assist individuals to develop strategies for understanding a new cultural setting. The second question is "what is this person like and why are they this way?" (Earley & Ang, 2003, p. 93). Different types or styles of reasoning and decision making in response to this second question might lead individuals to develop a cultural map of other people (Earley & Ang, 2003). Finally, this reasoning and decision making from the second question may lead individuals to ask a further question, like "what can people be like and why?" (Earley & Ang, 2003, p. 93).

In order to make sense of these three questions, individuals need higher-order mental processing to reflect and integrate new knowledge (Earley & Ang, 2003). Meatacognitive CQ is a higher-order mental process that helps individuals reflect and comprehend their cultural knowledge (Earley & Peterson, 2004; Lin et al., 2012). Metacognition has been defined as "knowledge and cognition about cognitive phenomena" (Flavell, 1979, p. 906) and as "thinking about thinking" (Earely & Ang, 2003, p. 100; Earley & Peterson, 2004, p. 106). Flavell (1979) explained that metacognitive monitoring can occur through basic actions such as in metacognitive strategies that involve a cognitive judgment or procedure facilitated to achieve some desired goal. This metacognitive strategy is intended to confirm for the individual that the right answer has been found (Earley & Ang, 2003).

In addition, Nelson and Narens (1995, p. 16) explained "judgment of learning" or "feeling of knowing," a concept based on metacognition that a person's metacognitive accuracy varies across time and task, unlike a person's ability in memory that is stable

across time and task. That means individuals' metacognitive accuracy for one task cannot be generalized to metacognitive accuracy for another task (Earely & Ang, 2003). Moreover, metacognitive accuracy is not stable across settings, such as in different cultural situations (Earley &Ang, 2003). Livermore (2011) also explained metacognitive CQ as a strategy that confirms the accuracy of a person's judgment about their own thought process, thus supporting that person's ability to make sense of culturally diverse experiences. Consequently, developing effective metacognitive CQ is important for individuals' success in culturally diverse settings.

Cognitive CQ. The second facet of CQ, cognitive CQ, refers to individuals' mental knowledge or representations of their environment named "schemas" in which they associate their perceptions and ideas (Earley & Ang, 2003). Earley and Ang (2003) explained three types of knowledge: (a) declarative knowledge, (b) procedural knowledge, and (c) conditional knowledge. The first type, declarative knowledge, involves knowing information about things. This declarative knowledge is potentially gained through asking colleagues general questions about a new cultural setting (Earley & Ang, 2003). The second type of knowledge is procedural knowledge, which involves knowing how to operate things (Earley & Ang, 2003). This second type of knowledge usually can be gained through observation and mimicking others. Lastly, conditional knowledge involves knowing the why and when of things. This would require individuals to be able to apply declarative and procedural knowledge at the right time and setting (Earley & Ang, 2003).

Decision-making about the right time and setting may occur in various styles of reasoning such as analogical and inductive reasoning (Earley & Ang, 2003). People are different in their approaches to reasoning about how and why they act certain ways or make the decisions that they do (Earley & Ang, 2003). Specifically, in different cultural settings a cultural context influences how people respond to a new environment. Consequently, questioning, observing, identifying, and creating cognitive and metacognitive strategies for dealing with a new culture is really important (Earley & Ang, 2003).

Earley and Ang (2003) suggested that the ability to generate effective and accurate representations of different cultures requires two types of intellectual information processing, both intrapersonal cognitive processing, i.e., knowing the how and when of things, and metacognitive processing, i.e., the accuracy of judgment of learning. These intellectual information processes allow individuals to comprehend their own specific cultural norms and practices, as well as the ability to generate knowledge about cultural differences (Ang et al., 2006; Ang et al., 2011; Ng & Earley, 2006). In other words, individuals with high cognitive CQ and metacognitive CQ are more likely to perform at higher levels in culturally different settings than are individuals who have low cognitive CQ and metacognitive CQ.

Motivational CQ. The third facet of CQ is motivational CQ. The topic of motivation is rarely mentioned in research on cross-cultural concepts. However, Earley and Ang (2003) argued that intellectual processing alone does not result in adequate encouragement for individuals to demonstrate their understanding of new cultures. It is

important for people to develop the need or motivation in order to interact in new cultures (Ang et al., 2011; Earley & Ang, 2003; Earley & Peterson, 2004; Livermore, 2011). Motivational CQ refers to the desire or need to adapt to new cultural settings with ongoing learning and functioning in new cultural environments (Ang et al., 2006; Ang et al., 2007; Ang et al., 2011; Blasco, Feldt, & Jakobsen, 2012; Lin et al., 2012).

Need is a factor that drives an action. However, it is difficult for people to act comfortably in new cultures without the confidence to engage successfully (Earley & Ang, 2003; Earley & Peterson, 2004; Livermore, 2011). In social learning, individuals decide to imitate or not to imitate a model's behaviors based on motivation and self-efficacy factors. Self-efficacy has been defined as an individual's expectation of success in specific situations (Bandura, 1986). In addition, there is at least one of the following three types of motivation involved in social learning: (a) feeling intrinsic motivation for imitating the model's behaviors, (b) receiving extrinsic rewards, and (c) gaining vicarious pleasure through observing others being reinforced for behaviors (Morrison, Ross, Kalman, & Kemp, 2013; Van Dyne, Ang, Ng, Rockstuhl, Tan, & Koh, 2012). However, efficacy judgment is not a simple task. In complex or ambiguous settings, in this case new cultural settings, individuals have to judge their multi-efficacy on new language, gesture, and others. The complexity of the setting may create a challenge for motivational CQ (Earley & Ang, 2003).

Goal setting has also been included in motivational CQ (Earley & Ang, 2003; Earley & Peterson, 2004; MacNab et al., 2012). Goal-setting is one of the most effective motivational strategies for improving performance in organizational settings (Locke &

Latham, 1990; Locke, Shaw, Saari, & Latham, 1981). It is the idea that human behavior is motivated and regulated by goals and aspirations (Austin & Vancouver, 1996). It provides direction, goal commitment, feedback in relation to the pursuit of goals (Latham & Locke, 2007). Smith, Ntoumanis, and Duda (2007) stated that goal attainment was positively linked to need satisfaction, thus being a predictor of psychological well-being. From a cultural perspective, self-efficacy and clear direction influence positive adjustment (Wu & Ang, 2011). Individuals with high motivational CQ will be more likely to value cross cultural interactions and consider cross cultural assignments as motivating and challenging tasks than their counterparts who have low motivational CQ. These individuals with high motivational CQ find that learning and achievement in new cultures is a reward that encourages them to continue learning and functioning in different cultural settings.

Behavioral CQ. The fourth facet of CQ is behavioral CQ. Behavioral CQ refers to intentional-observable behaviors in different cultural environments (Ang et al., 2011; Earley & Ang, 2003; Earley et al., 2006; Macnab et al., 2012). Earley and Ang (2003) defined these behaviors narrowly to include only overt or observable behaviors, both verbal and nonverbal. Consequently, behavioral CQ is what individuals say or do (Earley & Ang, 2003). Overt behaviors can be observed through communication and language, while covert behaviors involve tones, gestures, and body language (Ang et al., 2006; Earley & Ang, 2003; Earley & Peterson, 2004; Ng & Earley, 2006; Van Dyne et al., 2012). These invisible aspects of behavior (e.g., thinking and motivational) have already been discussed in metacognitive CQ, cognitive CQ, and motivational CQ (Earley & Ang,

2003). Another feature of behavioral CQ is that it focuses only on behaviors that impact the social environment in different cultural contexts, not within a single culture (Earley & Ang, 2003). Lastly, culturally intelligent behaviors are consequences of metacognitive, cognitive, and motivational components of CQ. These behaviors, therefore, must be strategic, purposeful, and motivational-oriented.

Consciousness and mindfulness are very important in self-presentation in cross cultural settings (Earley & Ang, 2003). Individuals want locals in a new culture to perceive that they can behave effectively in a favorable manner (Earley & Ang, 2003). When this happens, positive consequences such as compliments, recognition, and respect from the interaction are more likely to ensue (Rosenfeld, Giacalone, & Riordan, 1995). These positive consequences allow individuals to feel more confident in the new cultures; any feelings of shame and doubt in these interactions will have a greater chance of diminishing (Landrum & McDuffie, 2008). The resulting pleasant feelings increase the likelihood of intercultural interaction behaviors. However, if individuals show a lack of concern for self-presentation in cross cultural settings, the individuals may become excluded from these new cultures (Earely & Ang, 2003). This cultural exclusion may result in feelings of shame and doubt. This shame and doubt, or other unpleasant feelings, may likely cause individuals to avoid engaging in intercultural interactions (Landrum & McDuffie, 2008). In the worst case, individuals may even develop mental health problems in the new cultural setting.

Individuals with high behavioral CQ will develop better self-presentation skills and higher self confidence in cross cultural settings than individuals who have low

behavioral CQ (Earley & Ang, 2003). The high behavioral CQ is a consequence of high metacognitive, cognitive, and motivational components of CQ (Earley & Ang, 2003). If individuals cannot develop high behavioral CQ in the cross cultural setting, they may be excluded from the new culture. They may then develop a form of insecurity, making it very difficult to function properly in the new culture.

Empirical research studies on Earley and Ang's concept of CQ. Based on Earley and Ang's concept of CQ, Moon et al. (2012) examined the CQ as the mediator between the two predictors (previous international experience and comprehensive pre-departure CCT) and cross cultural adjustment. Moon et al. (2012) collected the data with 190 Korean expatriates from the seven largest Korean companies in different industries (e.g., electronic, chemicals, information technology). Results showed that there was a correlation between the two predictors and the adjustment outcome on the mediating effect of CQ (Moon et al., 2012). However, different types of experiences and cultural trainings related differently to CQ. Previous international non-work experience was more positively correlated with CQ than previous international work experience. Comprehensive pre-departure CCT rather than length of the pre-departure CCT was also more positively related to CQ.

Nevertheless, Engle and Crowne (2014) conducted an experimental research study with 135 undergraduate and graduate students in order to examine the impact of a short-term international experience on CQ. Engle and Crowne (2014) found that there was a significant increase in all four factors of CQ in the experimental groups who experienced a short-term visit (7-12 days) in different cross cultural settings. However,

there was no CQ change in the control groups who did not travel out of the country during the period of the experimental study.

In addition, Ang et al. (2006) examined relationships between the Big Five personality traits (conscientiousness, agreeableness, emotional stability, extraversion, and openness to experience) and the four CQ factors with 338 business undergraduate students at a large public university in Singapore. Ang et al. (2006) found various relationships among the five personality traits and the four CQ factors. Specifically, openness to experience was found to be significantly correlated to all four factors of CQ.

Furthermore, CQ was also found to be correlated with different outcomes. Imai and Gelfance (2010) conducted a research study with 236 full-time employees based on a market search tool. Imai and Gelfance (2010) found that motivational CQ was significantly correlated with pro-social value orientation and cooperative heuristics. Imai and Gelfance (2010) also conducted another study with 130 undergraduate and graduate students gathered from an advertisement at a large public university. They found the effect of overall CQ in complementary and reciprocal sequences of integrative information behaviors. However, only motivational CQ was significantly correlated with complementary sequences of integrative information behaviors, if controlling for international experience, openness, extraversion, cognitive ability, and emotional intelligence. And, only behavioral CQ significantly predicted reciprocal sequences of integrative information, if controlling for the same previous variables.

Lastly, Groves and Feyerherm (2011) conducted a study with a total of 420 participants: work unit leaders (n = 99) and their direct reports (n = 321) from 99

organizations that participated in the study. The results of the study showed that the followers' perception of leader performance and team performance was evaluated higher for the leaders who scored high in CQ.

Thomas's Concept of CQ

The second stream of literature that undergirds research on this topic is David Thomas's concept of CQ. Thomas and Inkson (2004) proposed three main components of CQ: (a) knowledge, (b) mindfulness, and (c) behavior, which are developed based on a system of interacting abilities in intelligence theory (Sternberg, 1997; Sternberg & Detterman, 1986). The three components are designed to be interconnected to each other. Specifically, the abilities to be actively attentive are known to be important to advance individuals' knowledge and behavior-skills in different cultural settings (Thomas, 2006; Thomas & Inkson, 2004, 2009). Consequently, every experience in different cultural settings will build on the other experiences in order to develop and sustain CQ (Thomas & Inkson, 2009).

Knowledge. The first component of CQ, knowledge, refers to individuals' detail knowledge about cultures such as what culture is, how cultures are different, and how culture influences behavior-skills. Thomas (2006) simply called this component of CQ "knowledge of cultural difference" (p. 81). Thomas (2006) explained that this knowledge of cultural difference is the fundamental component for individuals to be able to adapt to new cultures. There are two types of knowledge of cultural differences: (a) content knowledge and (b) process knowledge.

First, content knowledge of cultures refers to the basic knowledge and understanding of individuals' own behaviors and others' behaviors. If the individuals are able to recognize and define the nature of the differences between their own behaviors and others', this indicates an ability of individuals' mental processing, which is the core of intelligence theory (Thomas, 2006). Additionally, content knowledge leads individuals to be able to identify cultural similarities and differences (Thomas, 2006). If experiences in new cultures can be integrated into the individuals' past content knowledge, "assimilation" occurs. However, if the experiences cause individuals to modify their past content knowledge, "accommodation" occurs. In both, assimilation and accommodation processes, individuals' mental processing expands constantly, which implies individuals' development of knowledge (Wachtel, 1980).

However, knowing content of culture does not always influence behavior. Thomas (2006) explained that content knowledge can affect behaviors only if both cognitive influence and motivational influence exist. First, cognitive mechanisms involve different types of intellectual skills (e.g., problem solving, creativity) and information processing (e.g., perception, intention, memorization) (Morrison et al., 2013). Individuals apply cognitive mechanisms to evaluate different priorities for what stimuli deserve the most attention and action (Thomas, 2006). Moreover, cultural differences influence what is desirable and this creates a motive to either take an action or not take an action.

Nonetheless, knowledge about different cultures can lead to general knowledge about cultural behaviors, but not necessarily which behaviors are appropriate for different

cultural settings. Consequently, mindfulness has been introduced to support individuals to develop proper behaviors in different cultural settings.

Mindfulness. Mindfulness is a key component that leads to deliberate awareness and reflection on cues on a here-and-now basis (Brown & Ryan, 2003; Buchheld, Grossman, & Walach, 2001; Troy, Shallcross, Davis, & Mauss, 2013). Thomas and Inkson (2004) introduced mindfulness as a mediator process between knowledge and action. Mindfulness leads individuals to monitor their own internal state and external environment (Felver, Doerner, Jones, Kaye, & Merrel, 2013). That means individuals can be mindful of their personal sensations, perceptions, emotions, and other mental processes, as well as of external stimuli. Consequently, individuals with high mindfulness are able to evaluate situations from several perspectives based on their internal personal processes and external stimuli. The ability to evaluate situations allows them to understand and empathize with other people who may have a different cultural background (Gardner, 1995).

Thomas and Inkson (2009) explained three interrelated processes to apply CQ in cross-cultural interactions: (a) mindful attention, (b) mindful monitoring, and (c) mindful regulation. First, mindful attention means applying all of the senses in order to understand situations such as hearing the words together while noticing the expression of the words (Thomas & Inkosn, 2009). This mindful attention also implicates that individuals are open minded and use the context of the situations to support their understanding. Second, mindful monitoring refers to being aware of our own assumptions and understanding the situation from the other's view (Thomas & Inkson, 2009). In other

words, individuals put themselves in other people's shoes and view the situation from others' perspectives. Third, mindful regulation means developing new mental maps for other people who are from different cultures, so individuals' appropriate responses and their thinking can be developed from their new mental maps (Thomas & Inkson, 2009).

Accordingly, applying mindfulness in cross-cultural settings leads individuals to connect between cognitive knowledge and action in different ways. Logan (1989) discussed how individuals would be able to develop better focused attention, even though there are many attractions in cross-cultural settings. Individuals will have more capacity for their cognitive processes to analyze situations in more sophisticated ways, not relying on simple cognitive representations such as using stereotypes (Logan, 1989). Consequently, this process helps individuals to not respond automatically by using their cognitive processes and knowledge wisely before taking action (Logan, 1989). Lastly, this process allows individuals to prevent undesirable responses and develop responses that are more consistent with goals or motives from mindful cognitive processes.

Behavioral skills. The third component of CQ is behavioral ability (Thomas & Inkson, 2004). Thomas and Inkson (2004) described behavioral ability as the ability to demonstrate appropriate behaviors or social skills in new cultural settings. Accordingly Thomas and Inkson (2009) changed the name of the component from behavioral ability to cross-cultural skills.

Thomas (2006) explained two sources of the appropriate behaviors that individuals may apply in new cultural settings. First, individuals can choose appropriate behaviors that have been accepted for different cross cultural settings. In other words,

individuals apply to new cultural settings behaviors that they have learned and were rewarded for in previous different intercultural settings. Second, it may be necessary for individuals to estimate the new cultural situations and generate new appropriate behaviors to that specific situation. However, generating the new appropriate behaviors does not mean individuals will just be able to mimic typical behaviors in the new culture (Thomas, 2006).

Cross cultural skills are developed based on the awareness of the individuals' own knowledge of the other cultures, the abilities to actively be aware of internal states and external cues, the awareness of the possible outcomes toward the actions, and the awareness of their own motives and goals that align with the expected possible outcomes (Thomas, 2006; Thomas & Inkson, 2004, 2009).

Empirical research studies on Thomas's concept of CQ. Building on Thomas's concept of CQ, Tuleja (2014) examined the mindfulness component as a critical moderator between knowledge and behaviors in cross cultural settings. Tuleja (2014) conducted a CQ study of a group of MBA students (n = 71 students, n = 141 papers) in a business school in the Midwest, United States. The mindfulness component was examined before and after pre-departure training (as the foundation knowledge) and a cross-cultural immersion experience in China. A total of 141 papers were analyzed using a coding scheme for reflection (Tuleja, 2014). Results showed that the students who increased their mindfulness were able to demonstrate new culturally sensitive perspectives and develop more attentive responses in the new culture (Tuleja, 2014).

Accordingly, the study determined the importance of mindfulness as the moderator between knowledge and cultural sensitivity in cross-cultural settings.

In addition, Matsumoto, Hwang, and Yamada (2012) studied the importance of cultural context and cues from the perspective of individuals from different cultural backgrounds. Matsumoto et al. (2012) conducted an experimental study with Americans (n = 242), Japanese (n = 122), and Koreans (n = 98) who were born and raised in their original countries. The results showed that the ability to empathize and develop proper manners in different cultural settings was influenced by the ability to recognize cultural context and cues. Accordingly, the study suggested the significance of the abilities to be actively attentive and to reflect cues in different cultural settings.

Peterson's Multiple Intelligences of CQ

The third and final stream of literature supporting this topic is Brooks Peterson's multiple intelligences of CQ. Peterson (2004) proposed a different perspective of CQ based on Gardner's multiple intelligences (1983). Peterson defined CQ as:

> Cultural intelligence is the ability to engage in a set of behaviors that uses skills (i.e., language or interpersonal skills) and qualities (e.g., tolerance of ambiguity, flexibility) that are tuned appropriately to the culture-based values and attitudes of the people with whom one interacts. (Peterson, 2004, p. 89)

Peterson (2004) viewed CQ as the ability to transform individuals' own knowledge and awareness in order to be able to conduct proper behaviors in cross cultural settings by applying multiple skills. The essence of Peterson's (2004) perspective is the ability to apply different skills in cross cultural contexts. Consequently, he did not

agree to use the term “Cultural Quotient” (CQ) because it only represents a measurement scale of human intelligence. Peterson (2004) explained that he did not agree to use the term CQ because it is an oversimplification of a complex concept like cross culture intelligence. He encouraged individuals to use culture scales only to help them increase their awareness of different areas in cross cultural skills.

Nevertheless, Peterson (2004) proposed three main components of cultural intelligence: (a) knowledge, (b) awareness, and (c) behavior-skills, which are comparable with the three components of Thomas’s concept of CQ. The first component of cultural intelligence is knowledge (Peterson, 2004). Knowledge refers to knowledge about cultures (e.g., facts, places, economics, history, cultural traits) (Peterson, 2004). The second component is being aware of one’s self as well as others. The third and most significant component of Peterson’ concept of cultural intelligence is having specific skills. Peterson (2004) believed that individuals can enhance both knowledge and awareness of different cultures. Subsequently, the knowledge and awareness will lead individuals to change their behaviors and skills in order to be successful in cross cultural settings.

Multiple intelligences of CQ. Gardner (1983) proposed a total of seven different intelligences: (a) linguistic, (b) logical-mathematical, (c) spatial, (d) musical, (e) body and kinesthetic, (f) interpersonal, and (g) intrapersonal, based on the assumptions that there are more than one nature of intelligence. Peterson (2004) brought four of these seven intelligences and proposed the concept of multiple intelligences of CQ. Peterson stated:

> I propose that cultural intelligence is a unique and vital thread that runs through (and then beyond) various aspects of multiple intelligences theory and emotional intelligence theory, especially in the following four areas: linguistic, spatial, intrapersonal (or emotional), and interpersonal intelligence. (Peterson, 2004, p. 90)

Linguistic intelligence. Linguistic intelligence involves the ability to communicate and understand the meaning of words through reading, writing, listening, and speaking (Gardner, 1983). Peterson (2004) discussed that individuals who can communicate in the host's language will have a better chance of charming the host and making a positive impression. The ability to communicate in the host's language represents individual's genuine interest in the host culture (Peterson, 2004). For instance, individuals can create the first impression to the host by pronouncing his or her name correctly (Peterson, 2004).

Spatial intelligence. Spatial intelligence refers to the skill of understanding space, shapes, objects, and pattern in the environment (Gardner, 1983). Peterson (2004) argued that individuals who develop spatial intelligence will have a better understanding of, for example, how people in the different cultures arrange their spaces and how close they sit or stand next to each other. The ability to develop appropriate spatial behaviors in new cultures can make people in the different cultures feel comfortable in cross-cultural interactions (Peterson, 2004).

Intrapersonal intelligence. Intrapersonal intelligence involves individuals' ability to reflect on their self, beliefs, emotions, and other related inner cognitive tasks (Gardner,

1983). Peterson (2004) conceptualized emotional intelligence as being similar to intrapersonal intelligence. Peterson (2004) noted that it is necessary for individuals to be able to reflect on their self and culture. As a result, individuals can compare themselves with others and see the opportunity to adjust their behaviors in new cultural settings (Peterson, 2004).

Interpersonal intelligence. Interpersonal intelligence refers to the ability to understand and empathize with other people's feeling and emotions (Gardner, 1983). Individuals who develop interpersonal skills will be able to interact appropriately with people from different cultures (Peterson, 2004). Peterson (2004) argued that interpersonal skills are the most important among the four intelligences because they represent an ability that goes beyond the language aspects of communication. Interpersonal skills represent individuals' ability to interact in different cultural settings, which can be appealing to others.

Empirical research studies on Peterson's multiple intelligences of CQ. With regard to research studies on multiple intelligences, Behjat (2012) examined the relationships between two predictors (interpersonal and intrapersonal intelligences) and foreign-language learning with 150 male and female sophomore students majoring in English at Islamic Azad University, Iran. The participants were divided into four groups based on the results of a pre-structured interview (Behjat, 2012). These four groups were interpersonal intelligence, intrapersonal intelligence, both interpersonal and intrapersonal intelligence, and either low or no level of interpersonal and intrapersonal intelligence. Reading and grammar sections of TOEFL test were used to indicate the participants'

language ability (Behjat, 2012). The results showed that males' intrapersonal intelligence and females' interpersonal intelligence were significantly related to foreign-language learning (Behjat, 2012). The results also indicated that these three variables were independent from each other.

In addition, Grinblatt and Keloharju (2001) conducted a study on the influence of distance, language, and culture on stockholdings and trade with Finnish firms. Results showed that distance, language, and culture were significantly correlated with investors' decision to invest with the firms (Grinblatt & Keloharju, 2001). Specifically, the language results showed that the firms who published their annual reports in Finnish and Swedish created larger investors than the firms who published only one language (Grinblatt & Keloharju, 2001). Accordingly, knowing the investors' languages led the firms to create larger group of customers and revenues.

Finally, Duffy, Gordon, Whelan, Cole-Kelly, and Frankel (2004) conducted a study with physicians and found that strong communication and interpersonal skills led to better diagnoses, therapy, and empathy. Lastly, Ayiro (2009) collected data from 100 high school principals from different regions in Kenya. The results showed a significant correlation between the principals' emotional intelligence and the schools' performance ratings.

In conclusion, there are three main streams on CQ identified in the literature: Earley and Ang's (2003) concept of CQ, including four aspects, metacognition, cognition, motivation, and behavior; Thomas and Inkson's (2004) model of CQ, including three components, knowledge, mindfulness, and behavioral skills; and

Peterson's (2004) model of multiple intelligences, including linguistic, spatial, intrapersonal (or emotional), and interpersonal intelligence. Thomas emphasized the importance of individual mindfulness for understanding situations, being aware of one's own assumptions, and developing new mental maps of other people while interacting in cross cultural settings. Thomas's concept of attentive and reflective CQ proposed that appropriate behaviors and skills will be demonstrated in cross cultural settings through mindfulness (defined as an individual's ability to act attentively and to reflect on clues, internal and external, on a here-and-now-basis). Thomas specified that mindfulness is one of the important components in the construct of CQ. Consequently, the following hypothesis was derived:

Hypothesis 1*:* Mindfulness will account for additional variance in expatriate performance above and beyond the original four sub-components of CQ.

Proposed Research Variables of Cultural Intelligence

The purpose of this study was to examine the relationships among cross-cultural experience (CCE), cross-cultural trainings (CCTs) in Thai culture and in the general culture, openness to experience, expatriate performance, and cultural intelligence (CQ) within a sample of overseas teachers employed in international educational institutions in Thailand. Path analysis was primarily conducted to examine the sequences of relationships among the variables in the present study. The proposed sequences of relationships among the variables in the present study were as follows. Cultural intelligence was considered a mediating variable between CCE and expatriate performance, as well as between CCTs and expatriate performance. A personality trait –

openness to experience – was considered a moderating variable between CCE and CQ, as well as between CCTs and CQ.

Cross-Cultural Experience

Individuals' CCE has been argued to influence different outcomes such as work and non-work adjustment (Moon et al., 2012; Selmer, 2002; Takeuchi et al., 2005) and cultural effectiveness (Lee & Sukoco, 2010). The experiences facilitate individuals' ability to visualize accurately what to expect in a new cultural environment (Lee & Sukoco, 2010). In contrast, insufficient CCE was found to be related to individuals' difficulties with developing their understanding of the new culture and completing their international assignments, which, in turn, could impact individuals' intent to return early (Takeuchi et al., 2005). However, Takeuchi et al. (2005) stated that CCE usually has been analyzed as a control variable, and there was a positive, but not significant, relationship between the CCE and adjustment.

Cross-cultural experience is considered a multidimensional concept. Takeuchi et al. (2005) developed a model of CCE which is composed of the following dimensions: (a) current and past, (b) number and length, (c) country-specific and country-non-specific or general, and (d) work and non-work. First, the time component is critical in CCE. Takeuchi et al. (2005) considered both a current position and past experiences as factors that influence individuals' adjustment. In addition, individuals with more numerous or longer past experiences are likely to develop a more comprehensive set of cognitions than individuals with fewer or shorter prior CCE. Thus, if individuals had more and longer culture-specific past experiences with a host country, the past experience will influence

individuals' adjustment more than the influence of a current position. Moreover, different types of experiences, including work and non-work, influence individuals differently in developing their cognitive ability. For example, individuals with non-work experiences may develop cognitive schema to adapt to novel environments when traveling. On the other hand, individuals with work experiences may need to develop more specific intercultural cognitive values such as developing an ability to cope with uncertainty and work in complex environments.

Within CQ research studies, individuals' CCE has been studied as a moderator (e.g., Lee & Sukoco, 2010), a controlling variable (e.g., Imai & Gelfand, 2010), and an antecedent (e.g., Crowne, 2008; Engle & Crowne, 2014; Moon et al., 2012). The following section will discuss several empirical research studies, some already mentioned in previous sections. This section focuses on the cross-cultural experience aspect of the studies. Lee and Sukoco (2010) conducted a research study with expatriates in Taiwanese multinational corporations by using prior cross-cultural work and non-work experience as moderators between CQ and cultural adjustment, as well as between CQ and cultural effectiveness. Lee and Sukoco (2010) adopted a model of CCE developed by Takeuchi et al. (2005) to measure frequency and length of prior CCE. The results showed that CCE could serve as a moderating variable. This means there is a difference between expatriates with high prior CCE and low CCE regarding overall CQ score. Interestingly, having higher CQ did not explain higher levels of cultural adjustment or cultural effectiveness, unless expatriates also had high prior CCE. Hence, expatriates with more

prior CCE and lower levels of CQ had lower levels of adjustment and effectiveness than expatriates with low experience and at the same or higher level of CQ.

Imai and Gelfand (2010) collected data on 65 pairs of Americans and East Asians at both undergraduate and graduate levels on the impact of CQ on negotiation sequences by controlling for individual difference characteristics, including their CCE. Imai and Gelfand (2010) used a model of CCE developed by Takeuchi et al. (2005) to measure the total length of time participants had spent living abroad. There were significant correlations between CCE and overall CQ, as well as between CCE and behavioral CQ. However, there was no significant correlation between current experience and overall CQ, as well as between current experience and the four factors of CQ. Overall CQ and motivational CQ were found to predict negotiation behaviors on complementary sequencing of integrative tactics, and behavioral CQ was found to predict negotiators' cooperative motives. Cross-cultural experience, however, negatively predicted negotiators' cooperative motives. Hence, CCE was important to only specific types of CQ, in this case behavioral CQ. Current experience did not show strong correlation with overall CQ and its subcomponent. Lastly, individuals with longer CCE were found to have lower negotiators' cooperative motives.

Crowne (2008) investigated the relationships between CCE and different CQ components by collecting data with a convenience sample from multiple organizations and students in business classes at a moderately-sized university located in the northeastern United States. Crowne (2008) specifically looked at types of visits and number of countries visited by participants. In general, when comparing individuals who

had any type of CCE (including work, education, vacation, or other experiences), with those who had not had any, the results showed that participants with both employment abroad and education abroad were found to have higher levels of overall CQ and meta-cognitive CQ. Current employment was also related to higher levels of overall CQ. Education abroad showed a high correlation with cognitive CQ, motivational CQ, and behavioral CQ. In addition, number of countries visited was related to CQ subcomponents and overall CQ differently. In general, the results showed that participants who reported both high number of countries visited for employment and high number of countries visited for education were found to have higher levels of overall CQ. Furthermore, number of countries visited for employment was related to meta-cognitive CQ, cognitive CQ, and behavioral CQ. Number of countries visited for education was related to cognitive CQ and behavioral CQ. Interestingly, the number of countries visited for vacation and other purposes were related to motivational CQ. Hence, different types of CCE were related to different CQ subcomponents, and only some exposures can be related to overall CQ.

Engle and Crowne (2014) conducted a study on the impact of short-term CCE ranging from 7 to 12 days within a structured study abroad service program on four CQ components. A sample of 135 university students was divided into experimental and control groups. The participants in the experimental group were provided modest pre-trip preparation, and the control group was not. The participants in the control group did not go abroad while the participants in the experimental group participated in the study abroad program. The results showed that there was a significant increase in each of the

four components of CQ in the experimental group, but not in the control group. While there were correlations between CCE and different components of CQ during both pre-departure and returning periods, these correlations were not significant. This shows that there is an impact of CCE on four components of CQ; however, this influence of CCE on CQ components does not have a simple explanation.

In addition, cultural diversity within work teams and leader CQ were related to follower perceptions of leader performance and team performance (Groves & Feyerherm, 2011). Groves and Feyerherm conducted a study with 99 culturally diverse organizational leaders and 321 of their followers. The results showed that cultural diversity within work teams could serve as a moderating variable. This means there was a difference between high team diversity and low team diversity. Interestingly, leaders with high CQ did not significantly explain the perceptions of leader high performance or team performance, unless work teams had higher cultural diversity. Hence, highly culturally diverse work teams and leaders with low CQ received the perceptions of lower leader performance and team performance compared to leaders with the same level of CQ and work teams with lower cultural diversity. Consequently, current team cultural diversity could be considered another important approach for companies to develop employees' CCE.

Lastly, Moon et al. (2012) conducted a study with 190 expatriates working with large Korean companies on the effects of previous CCE (work and non-work) on cross-cultural adjustment (general and work). Moon et al. (2012) specifically looked at the frequency of previous CCE. CQ was considered a mediating variable, and goal orientation was considered a moderating variable. The results showed that different kinds

of previous CCE were associated with different types of cross-cultural adjustment with different mediating effects of CQ. Overall, there was a greater correlation of the previous cross-cultural non-work experience than the previous cross-cultural work experience on general and work adjustment, with a mediating effect from each of the CQ subcomponents. Hence, it is important to understand the influence of different types of previous CCE.

Given the evidence for the relationships between CCE and CQ, as well as CCE and cross-cultural outcomes, CCE was included in this research study as an independent variable, specifically the past-current-working length in years of experiences. Participants were asked to provide information on the total duration in years that they have spent working outside of their own country (Appendix A). Having longer CCE will explain higher levels of cross-cultural outcome through the effect of CQ. Consequently, the following hypotheses were derived:

Hypothesis 2: Cross-cultural experience

Hypothesis 2a*:* Cross-cultural experience will be positively related to CQ.

Hypothesis 2b*:* Cultural intelligence will mediate the relationship between CCE and expatriate performance.

Cross-Cultural Training

The concept of CCT was developed in the 1950s and has since evolved to assist individuals in learning, adjusting, and performing well in different cultural circumstances (Bhawuk & Brislin, 2000; Brislin & Pederson, 1976; Wang & Tran, 2012). Brislin and Pedersen (1976) defined CCT as a program designed for individuals to interact

effectively with fewer misunderstandings and lower stress in different cultural circumstances. In addition, Brislin and Yoshida (1994) stated that CCT is the official preparation for individuals to enhance effectiveness in interpersonal relations and workplace assignments in cultures other than their own. Bhawuk and Triandis (1996) expanded the scope of CCT to cover the situation where individuals are in their own culture, but encounter people from other cultures. Accordingly, CCT is a systematic preparation tool that is designed for individuals to develop effective interpersonal learning and performance for any different cultural circumstances.

Cross-cultural training has been claimed to be an effective cross-cultural interaction tool (Black & Mendenhall, 1990; Deshpande & Viswesvaran, 1992; Earley, 1987; Landis & Brislin, 1983; Littrell & Salas, 2005; Morris & Robie, 2001; O'Brien, Fiedler, & Hewett, 1971; Wang & Tran, 2012). Black and Mendenhall (1990) examined 29 empirical research studies and described effective CCT in cross-cultural skills (self, relationship, and perception dimensions), adjustment, and performance. Deshpande and Viswesvaran (1992) used meta-analysis to examine and find the effect of CCT on self-development, relationships, perceptions, adjustment, and performance.

The effect of CCT may vary depending on methods used to design a training program (Budworth & DeGama, 2012). Cross-cultural training may be considered most effective and valuable when related to existing experience in a host country and to the specific requirements of the international assignments, as opposed to other methods of providing knowledge (Black & Gregersen, 1999; Budworth & DeGama, 2012).

Many attempts have been made to create some classification in the different CCT techniques. Puck, Kittler, and Wright (2008) defined the concept of comprehensiveness of CCT as the number of CCT methods and contents in which expatriates participate. Puck et al. (2008) argued that the number of CCT methods and content can support the trainees' cross-cultural assignment effectiveness. Participating in a variety of CCT methods and content, namely the comprehensiveness of CCT, will enhance trainees' understanding of cultural differences from various perspectives. Within CQ research studies, many CCT methods and a variety of CCT content have been applied for trainees to develop different types of CQ. Surveying 190 expatriates working with large Korean companies, Moon et al. (2012) conducted a study on the effects of CCT (length and comprehensiveness) on cross-cultural adjustment (general and work). This research study was discussed earlier in the paper; however, here the CCT aspect of the study is reviewed. CQ was considered a mediating variable that mediates the influence of CCT on cross-cultural adjustment. Moon et al. (2012) specifically looked at the comprehensiveness of CCT, which was defined by Puck et al. (2008) as a variety of types of CCT. Moon et al. (2012) applied the typology of Tung (1981), which consists of five types of CCT: (a) area studies programs, (b) cultural assimilator programs, (c) language training programs, (d) sensitivity training program, and (e) field experience programs. The results showed that the comprehensiveness of CCT was positively correlated with CQ subcomponents more than the length of training programs. In addition, motivational CQ was a variable that mediated the influence of the independent variables and general adjustment.

However, Fischer (2011) conducted a study by introducing a variety of intercultural training interventions to 49 students. Six lectures, one simulation game, and one behavior modification session were provided to the participants. The data was collected before and after the interventions. The results showed that, unfortunately, the scores after the intervention on cognitive CQ and metacognitive CQ were significantly lower than the scores before the intervention was provided. In addition, there was no significant difference on CQ subcomponents between students who participated in the cultural training intervention and those who did not join the training.

In addition, Gudykunst et al. (1996) proposed a classification of CCT techniques with two major facets: (a) didactic versus experiential and (b) culture-general versus culture-specific. Didactic programs refer to programs where trainees are taught directly by instruction, whereas, experiential programs refer to programs that allow trainees' to gain direct experience through interactions (e.g., simulation games and exercise) with others in which a debriefing after a training section may be provided (Berry, Poortinga, Breugelmans, Chasiotis, & Sam, 2011). Culture-general method refers to programs that aim to provide a broad cross-cultural knowledge and intercultural communication and interactions to the trainees (Berry et al., 2011). Training on culture-general concepts includes cultural metaphors from Hofstede's (1999) dimensions and Kluckhohn and Strodbeck's dimensions (Gannon & Poon, 1997). Gertsen (1990) described that "culture-general training aims towards making participants understand the variation in culturally determined patterns of behaviors in general" (p. 353). Culture-specific trainings, in contrast, aim to provide specific knowledge, skills, and abilities (e.g., language, the

economic and political situation, major customs and attitudes) of one country culture (Berry et al., 2011). Gertsen (1990) described that "culture-specific training aims at making participants competent in one particular culture" (p. 354).

Culture-general training implies an increased self-awareness in cross-cultural settings (Gertsen, 1990). Increasing the awareness of our own beliefs, values, and behaviors and the awareness that others may think and behave differently is very important. However, cross-cultural researchers were unclear how awareness contributes to intercultural effectiveness (Abbe et al., 2007). Self-awareness was explained as a prerequisite for developing other cultural knowledge. Abbe et al., (2007) explained that culture-general training "may be abstracted from the specific cultures or experiences on which it is based" and "may not contribute directly to intercultural outcomes" (p. 14).

To test and examine the effectiveness among different types of CCT, Bhawuk (1998) conducted a study from 102 exchange students at a Midwestern U.S. university. Four different types of self-reading training media were conducted for each experimental condition: (a) cultural-general design, (b) culture-specific design, (c) culture theory-based design, and (d) control group design. It is important to note here that previous cross-cultural research has included culture theory-based concepts such cultural metaphors from Hofstede's (1999) dimensions and Kluckhohn and Strodbeck's dimensions in cultural-general design (Gannon & Poon, 1997). Regarding Bhawuk (1998)'s study, these two types of CCT were separated. The participants from the cultural-general design group received 36 critical incidents randomly selected from the 100 incidents from Brislin, Cushner, Cherrie, and Young (1986) culture-general assimilator. The participants

from the culture-specific design received 36 critical incidents from an existing culture-specific assimilator developed by Ito and Triandis (1989). And the participants from the culture theory-based design group received 36 critical incidents developed by using the four defining attributes and the vertical and horizontal typology of individualism and collectivism. Lastly, the participants from the control group received 48 pages of reading developed by Triandis (1994).

Bhawuk (1998) found that culture-general training had the most significant effect on participants' making correct attributions in intercultural interactions. Culture-specific training had significant and higher effects than culture-general training on intercultural sensitivity, category width (a cognitive individual difference variable), and information and opinion measures of reaction of the participants about training program. The culture theory-based design, in general, had the most significant effect on the different intercultural dependent variables, specifically in the intercultural sensitivity. However, culture theory-based design did not influence learners to be able to remember what they had learned from the training better than other conditions. Lastly, there was no significant difference among the four conditions on learners' behavior learning (face-to-face interaction with a person from different cultures). These findings imply that more empirical research on CCT is needed to make claims about the influence of different methods and content of CCT on a cross-cultural dependent variable, which in this case is expatriate performance.

Thai CCT and general CCT were included in this research study as the independent variables. Participants were asked to provide information on the total

number of times and duration in days when participating in Thai-culture-specific trainings, as well as on the total number of times and duration in days when participating in general culture trainings. Lastly, the participants were asked to provide information on when the most recent of their Thai-culture-specific trainings was delivered, as well as when the most recent of their general culture trainings was delivered. The participants answered the questions regarding the most recent of their Thai-culture-specific trainings and their general culture trainings on an ordinal scale: less than a year, 1-3 years, and more than 3 years ago (Appendix A). The higher total number of times and days for CCT explains higher levels of cross-cultural outcomes through the effect of CQ. However, having a longer period of time since the last CCT explains lower levels of cross-cultural outcome through the effect of CQ. I did not include all dimensions of CCTs – number of times, number of days, and the most recent of CCT – in the same model. It could be that all CCTs contribute to explaining CQ, and it could be that three variables may interact among others in explaining CQ and performance.

Hypothesis 3: Cross-cultural training

Hypothesis 3ai: Thai CCT will be related to CQ.

Hypothesis 3bi: Cultural intelligence will mediate the relationship between Thai CCT and expatriate performance.

Hypothesis 3aii: General CCT will be related to CQ.

Hypothesis 3bii: Cultural intelligence will mediate the relationship between general CCT and expatriate performance.

Personality Traits

This research study also sought to examine openness to experience as a moderator on the relationships between CCE and CQ, as well as between CCTs and CQ. Personality traits have been found to be related to CQ subcomponents and different adaptation outcomes (Ang et al., 2006; Imai & Gelfand (2010). Personality traits are the set of an individual's distinctive characteristics that are stable over long periods of time and are not specific to a certain task or situation (Chen, Gully, Whiteman, & Kilcullen, 2000). Personality traits could predict work behavior across time, contexts, and cultures in both domestic and cross-cultural settings (Ang et al., 2006). Specifically, the Big Five personality test is one of the most reliable personality tests in describing individuals' distinctive characteristics (Ang et al., 2006). Though the Big Five personality test was criticized in that it neglects to "offer a standard nomenclature for scientists working in the field of personality" (John & Srivastava, 1999), the Big Five structure uses the words that define the factors that almost everybody can understand (John & Srivastava, 1999). Further, the five factors were found to be robust across different regions of the world in 56 nations (Schmitt et al., 2007). Therefore, the personality traits have been adopted into different areas of research, including cross-cultural research, for understanding research findings in a meaningful and systematic manner (Ang et al., 2006; Bhatti, Battour, Ismail, & Sundram, 2014; Caligiuri, 2000).

Within CQ research studies, personality traits were frequently included to help cultural researchers to understand how personality traits and CQ subcomponents are related to outcomes. There are no consistent findings in this area; however there was a

research study that found that different personality traits predicted different CQ subcomponents. Ang et al. (2006) conducted a research study with 338 business undergraduates in Singapore. Ang et al. (2006) examined relationships between the Big Five personality traits and the four CQ subcomponents. The Big Five personality traits are: conscientiousness, agreeableness, emotional stability, extraversion, and openness to experience (McCrae & Costa, 2008). Conscientious individuals are usually careful, organized, and dependable. Individuals who are high in agreeableness are generally soft-hearted, trusting, cooperative, and helpful. Individuals who are high in emotional stability are generally calm, secure, and self-satisfied. Characteristics generally associated with extraversion include being sociable, assertive, energetic, and expressive. Lastly, characteristics generally associated with openness to experience include being imaginative and preferring variety (McCrae & Costa, 2008). The results showed that openness to experience was related to all four CQ subcomponents. Extraversion was related to cognitive CQ, motivational CQ, and behavioral CQ. Agreeableness was related only to behavioral CQ, and conscientiousness was related only to metacognitive CQ. Interestingly, emotional stability was negatively related to behavioral CQ. Ang et al. (2006) explained that individuals who are high in emotional stability may experience less excitement, and then may express less excitement in their verbal and non-verbal behavioral expressions. Hence, openness to experience was considered an important personality characteristic for individuals to work effectively in cross-cultural settings.

Imai and Gelfand (2010) examined the impact of CQ on different negotiation outcomes by controlling various types of individual characteristics, including openness to

experience and extraversion from the Big Five personality traits. This research study was discussed earlier in this paper; however, here the personality aspect of the study is considered. The data were gathered from 65 pairs of American and East Asian undergraduate and graduate students in the United States. The results showed that there were some significant correlations between personality traits and CQ subcomponents. However, there was no impact of openness to experience and extraversion on negotiation outcomes. Overall CQ, motivational CQ, and behavioral CQ had a positive impact on different negotiation outcomes; but, interestingly, cross-cultural experience had a negative impact on individuals' cooperative motive. Hence, though there were correlations between openness to experience and CQ subcomponents, as well as extraversion and CQ subcomponents, there was no additional contribution to the outcomes when the personality traits combine with CQ subcomponents. The personality traits did not account for the prediction of the outcomes variables.

In contrast, Ward et al. (2009) conducted a research study with 102 international students who had already been in a host country, in this case New Zealand, for at least one semester. Ward et al. (2009) examined different independent variables, including personality traits, four different CQ subcomponents, and other individual' characteristics, on various dependent variables: the Satisfaction With Life Scale (SWLS), Zung Self-rating Depression Scale (ZSDS), Sociocultural Adaptation Scale (SCAS), and Academic Adaptation Difficulties (AAD). Ward et al. (2009) used the Multicultural Personality Questionnaire (MPQ) to examine individuals' personality traits. There are a total of five subscales in MPQ: cultural empathy, open-mindedness, emotional stability, social

initiative, and flexibility (Ward et al., 2009). Cultural empathy is defined as individuals' ability to understand others who are from different cultural backgrounds. Open-mindedness is defined as a nonjudgmental attitude toward other cultures. Emotional stability is defined as individuals' ability to remain calm in difficult situations. Social initiative refers to individuals' preference for a proactive approach to events. Lastly, flexibility refers to individuals' tendency to adjust behaviors to various cultural settings (Ward et al., 2009). The results showed that there were significant correlations between personality traits and CQ subcomponents. However, CQ was not related to the four outcomes variables. Among the personality traits, emotional stability could predict all the four outcome variables. High emotional stability was associated with high satisfaction with life, low self-related depression, low sociocultural adaptation, and low academic adaptation difficulties. Cultural empathy was related to low sociocultural adaptation when not including CQ subcomponents. English language proficiency was related to low sociocultural adaptation and low academic adaptation difficulties. Hence, there could be an argument that there is no evidence to support CQ mediating between personality traits and adaptation outcomes.

Hence, personality traits have been found to be related to CQ subcomponents and different adaptation outcomes. In general, there is a significant relationship between personality traits and the four factors of CQ. However, when the effect of personality traits and different CQ subcomponents are combined, there was no additional explanation for different adaptation outcomes. Accordingly, I would like to examine the moderating effects of openness to experience – to see if levels of openness to experience relate

differently to CQ. Openness to experience has been selected because it has been shown to be related to all four CQ subcomponents (Ang et al., 2006). In addition, very little research has examined the moderating effect of openness to experience on the relationship between different cross-cultural independents and CQ. Accordingly, this study examines the moderating effects of openness to experience between CCE and CQ, as well as between CCT and CQ. The following hypotheses were derived:

Hypothesis 4: Openness to experience

Hypothesis 4a: Openness to experience will be positively related to CQ.

Hypothesis 4b: Openness to experience will moderate the relationship between CCE and CQ.

Hypothesis 4ci: Openness to experience will moderate the relationship between Thai CCT and CQ.

Hypothesis 4cii: Openness to experience will moderate the relationship between general CCT and CQ.

Expatriate Performance

Many criteria have been used to evaluate expatriates' successful international assignments, such as adjustment in the host country, completion of the assignment, job satisfaction, and task performance (Thomas & Lazarova, 2006). Caligiuri and Tung (1999) suggested that the multidimensional nature of international assignment effectiveness is composed of three criteria: (a) cross-cultural adjustment, (b) completion of the assignment, and (c) performance on the assignment. Shaffer, Ferzandi, Harrison, Gregersen, and Black (2003) identified successful expatriates using three criteria: (a)

psychological adjustment in different cultures, interactions, and work, (b) assignment withdrawal cognition, and (c) contextual and overall task performance.

Performance is a criterion that has received less attention and has usually been combined with overall expatriates' success. Thomas and Lazarova (2006) stated that "the literature of expatriation has rarely focused on performance as an outcome variable, choosing instead to discuss overseas success. There is a pervasive assumption that success implies successful performance, but the evidence is far from established" (p. 253). Thomas and Lazarova (2006) described expatriates' performance in two facets that are task-based performance and relationship-based performance. Thomas and Lazarova (2006) defined the task-based aspect of performance as "the accomplishment of goals and meeting objectives" (p. 255). Furthermore, the relationship-based aspect of performance was defined as "establishing and maintaining relationships and effectively interacting with coworkers, supervisor, and so on" (Thomas & Lazarova, 2006, p. 255).

Within CQ research studies, Lee and Sukoco (2010) conducted a study with expatriates in Taiwan. This research study was discussed earlier in this paper. Here, the performance aspect of the study is considered. Lee and Sukoco (2010) examined three criteria of expatriates' success: (a) cultural adjustment, (b) cultural effectiveness, and (c) performance. Lee and Sukoco (2010) adopted the expatriate performance scales from Black and Porter (1991) and Caligiuri (1997) including three items each on task and contextual performance. The results showed that three of these criteria were distinct constructs. There was no direct relationship between CQ and expatriates' performance. CQ needed to be mediated by cultural adjustment and cultural effectiveness before

affecting expatriate performance. In addition, Groves and Feyerherm (2011) conducted a study with 99 culturally diverse organizational leaders and 321 of their followers. This research study was also discussed earlier in this paper. Groves and Feyerherm (2011) examined the moderating effects of cultural diversity within work teams between leader CQ and leader-team performance. The results showed the significance of the moderating effects of cultural diversity in work teams. High cultural diversity within a work team was considered a moderating variable between high leader CQ and the follower perceptions of high leader performance and high team performance.

Rose, Ramalu, Uli, and Kumar (2010) examined the relationship between CQ and expatriate performance with 332 expatriates working in Malaysia. Rose et al. (2010) adopted 17 items to measure job performance, including five items from the work of Black and Porter (1991) and 12 items from the work of Caligiuri (1997). The items covered task performance, contextual performance, and assignment-specific performance. There was a positive relationship between CQ and expatriate performance, specifically metacognitive CQ and behavioral CQ. There was a positive relationship between metacognitive CQ and contextual performance. And behavioral CQ was positively related to contextual and assignment specific performance. Interestingly, there was no association between CQ dimensions and task performance.

However, Ang et al. (2007) conducted a research study with 98 international managers on CQ and three different intercultural effectiveness outcomes, including task performance. Peers rated task performance with three in-role behavior items, adapted from Tsui (1984; 1990) and Williams and Anderson (1991). The results showed that there

were positive relationships between metacognitive CQ and task performance and behavioral CQ and task performance.

Lastly, Chen et al. (2010) examined the mediating effect of culture shock on the relationship between CQ and performance. Chen et al. (2010) collected the data with 382 Philippine laborers working in Taiwan's manufacturing industries. Philippine laborers are considered the best qualified to be employed by most high-tech companies because of their English skills and decent level of education. The data were collected using a 7-item scale developed by Williams and Anderson (1991) that assesses employees' behaviors based on the requirements of their performance in a work role. The results showed that CQ had a positive relationship with performance. Metacognitive, motivational, and behavioral CQ were positively related to performance, but cognitive CQ showed a negative association with performance. Chen et al. (2010) claimed that this negative coefficient was due to the multicollinearity in regression. In addition, culture shock was a significant mediator of the influence of CQ on the performance of Philippine laborers.

These findings imply that more empirical research on CQ is necessary to confirm the relationships between CQ and performance. Ang et al. (2006) also specified that there was a necessity for additional research on CQ and types of performance.

Hypothesis 5: CQ will be positively related to expatriate performance.

According to these research hypotheses, I proposed the following model of CQ. See Figure 2.1.

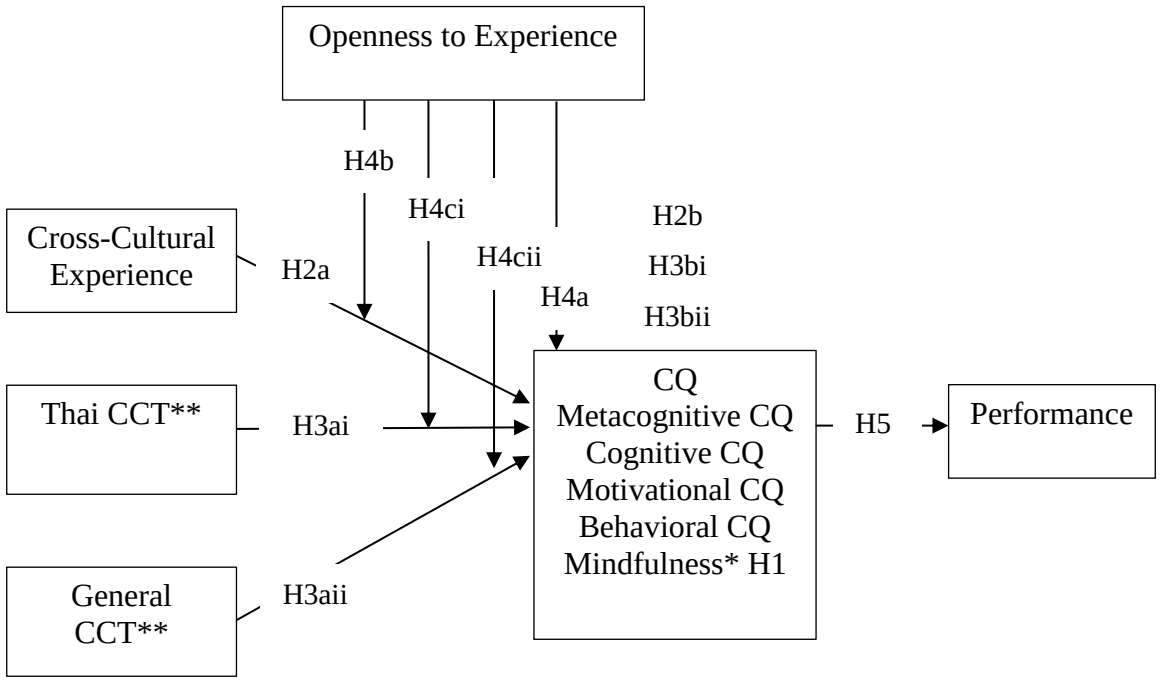

Figure 2.1. Hypothesized model of cultural intelligence as a mediator variable predicting the variable of expatriate performance.

Note. ***** The effect of CQ employed-mindfulness was examined in the separate models.
** Three different dimensions of both Thai and general CCTs were individually examined: (a) the total number of times for trainings, (b) the total number of days for trainings, and (c) the most recent of trainings.

Summary

This chapter provided a description of various attempts to define the constructs of CQ. Three main streams on CQ were identified in the literature: Earley and Ang's (2003) concept of CQ, including four aspects, metacognition, cognition, motivation, and behavior; Thomas and Inkson's (2004) model of CQ, including three components, knowledge, mindfulness, and skills; and Peterson's (2004) model of multiple intelligences, including linguistic, spatial, intrapersonal (or emotional), and interpersonal intelligence. Following the literature review, the proposed antecedents and consequence of CQ were identified. Cultural intelligence was considered a mediating variable between

CCE and expatriate performance, as well as between CCT and expatriate performance. A personality trait – openness to experience – was considered a moderating variable between CCE and CQ, as well as between CCT and CQ. Chapter 3 presents the research study design, the participants and data collection procedures, the instruments and questions used to collect data, and the research method.

CHAPTER 3

METHOD

This chapter describes the research study design, the participants and data collection procedures, the demographic characteristics and descriptive statistics, the instruments and questions used to collect data, and the methods employed for the data analyses.

Research Design

The purpose of this study was to examine the relationships among cross-cultural experience (CCE), cross-cultural trainings (CCTs) in Thai-culture-specific training and in general cross-cultural training, openness to experience, expatriate performance, and cultural intelligence (CQ) among overseas teachers employed in educational institutions in Thailand. The proposed sequences of relationships among the variables in this study are as follows: CQ is considered a mediating variable between CCE and performance, as well as between CCTs and performance; and, a personality trait – openness to experience – is considered a moderating variable between CCE and CQ, as well as between CCTs and CQ.

The self-report survey questionnaire was developed using five existing measurements and basic demographic questions. Approval for the study number: 1607E91001 was obtained from the University of Minnesota's Institutional Review Board (IRB) prior to collecting data (Appendix D). Pilot studies were conducted with HRD subject matter experts and a small sample of overseas teachers working in Thailand (N = 5). These pilot studies helped to determine the clarity of the survey instructions and

questions. Last, the survey was modified and administered to overseas teachers employed in various educational institutions in Thailand. After data collection, the data were analyzed in aggregate form. Path analysis was primarily employed to examine the sequences of relationships among the variables in this study.

Participants and Data Collection Procedures

The population of this study consists of overseas teachers employed in different educational institutions in Thailand. The education industry was selected as the population of interest because there is an increasing demand for international education services in Asia, particularly in Thailand (Bates, 2010; Prachachat, 2013). I contacted each of the educational institutions via email and phone calls and arranged meetings to explain to them the purpose of the research study and to ask for permission to collect data with their overseas teachers (Appendix C). I contacted a total of 70 international educational institutions across the country. For this study, convenience sampling was used. In particular, 22 institutions allowed me to collect data with their overseas teachers, which is 31 percent of the contacted institutions. This 31 percent is considered an acceptable response rate (Baruch & Holtom, 2008). Baruch and Holtom (2008) examined response rates for surveys used in organizational research in the years of 2000 and 2005 in 17 refereed academic journals, which covered more than 100,000 organizations. The average response rate for studies that collected data from organizations was 35.7 percent.

After obtaining approval to collect data from each of the international educational institutions, the survey was administered to overseas teachers at the institutions electronically or in a paper-based format, based on each institution's preference.

Participation in the study was voluntary. The first page of the survey contained the necessary information about the study: the purpose and significance of the study; the voluntary nature of participation in the study; the freedom of the respondents not to answer any questions or to withdraw their participation from the study; the procedure for the survey; the privacy and confidentiality of the responses; contact information; and the informed consent statement, to be signed if the participants agreed to participate in the survey (Appendix B). Then, the data were analyzed in aggregate form. The total number of participants in this research study was 219.

Demographic Characteristics and Descriptive Statistics

The participants consisted of overseas teachers (N = 219) employed at different international educational institutions in Thailand, including kindergartens, elementary schools, high schools, universities, colleges, and language institutes. The institution curriculum systems included the U.S., British, International Baccalaureate (IB), Thai, and other systems. The majority of the participants were female (52%). Most of the respondents (n = 199, 91%) had earned at least a Bachelor's degree. The average age of the overseas teachers was 36 years (SD = 9.5 years). The participants consisted of overseas teachers from different regions of Thailand, including Bangkok Metropolitan Region (n = 186), Central (n = 17), and other regions (n = 16). The nationalities of the participants included American, British, Filipino, Indian, South African, and others. The demographic characteristics of the participants are provided in Table 3.1.

Table 3.1

Demographic Characteristics of the Participants (N = 219)

Characteristic		*n*	%
Gender			
	Male	101	46
	Female	114	52
	Missing	4	2
Education			
	High school	15	6.8
	Bachelor's degree	137	62.6
	Master's degree	54	24.7
	Doctoral degree	8	3.7
	Missing	5	2.3
Age			
	20 years old or younger	2	0.9
	21 - 30 years old	70	32.0
	31 - 40 years old	75	34.2
	41 - 50 years old	47	21.5
	51 - 60 years old	16	7.3
	60 years old or older	1	0.5
	Missing	8	3.7
Nationality			
	American	18	8.2
	British	61	27.9
	Filipino	69	31.5
	Indian	11	5.0
	South African	10	4.6
	Others	37	16.9
	Missing	13	5.9

Measures

This study utilized five existing self-report instruments which are all well-established and have been validated in different cultures. The instruments were the Cultural Intelligence Scale (CQS) (Ang et al., 2007), the Toronto Mindfulness Scale (TMS) (Lau et al., 2006), the Openness to Experience Scale (Mowen & Spears, 1999), the Expatriate Task Performance Scale (Black & Porter, 1991), and the Contextual Performance Scale (Caligiuri, 1997). The first three instruments were used in their original format; however, the last two performance instruments were combined to measure both expatriates' task and contextual performances. In addition, a question about the length of time overseas teachers had spent working abroad was included in the survey. Lastly, questions regarding overseas teachers' experiences in CCTs, in Thai-culture-specific trainings, as well as in general culture trainings, were included. Participants were asked to provide information on the total number of times, duration in days, and the most recent of Thai CCT, as well as of general CCT.

Cultural Intelligence Scale (CQS)

Cultural Intelligence was measured using the Cultural Intelligence Scale (CQS). The CQS is a 20-item scale that was developed to measure four aspects of the CQ construct - metacognitive, cognitive, motivational, and behavioral CQ (Ang et al., 2007). The metacognitive CQ consists of four items related to a higher–order mental process that helps individuals reflect and comprehend their cultural knowledge (e.g., I check the accuracy of my cultural knowledge as I interact with people from different cultures). The cognitive CQ consists of six items that measure individuals' mental knowledge or

representations of new cultures (e.g., I know the cultural values and religious beliefs of other cultures). The five-item motivational CQ assesses individuals' motivation to interact in new cultures (e.g., I enjoy living in cultures that are unfamiliar to me). Lastly, behavioral CQ consists of five items related to intentional-observable behaviors in different cultural environments (e.g., I change my verbal behavior (e.g., accent, tone) when a cross-cultural interaction requires it). The CQS is scored on a seven-point Likert-type scale ranging from 1 "strongly disagree" to 7 "strongly agree." Ang et al. (2007) found the internal consistency of four CQS subscales to be adequate. They reported the coefficient alphas to be .72 for metacognitive CQ, .86 for cognitive CQ, .76 for motivational CQ, and .83 for behavioral CQ.

Toronto Mindfulness Scale (TMS)

Mindfulness was measured using the Toronto Mindfulness Scale (TMS). The TMS is a 13-item measure of two different factors of the state of mindfulness--curiosity and decentering (Lau et al., 2006). Curiosity consists of six items that emphasize "awareness of present moment experience with a quality of curiosity" (e.g., I was curious to see what my mind was up to from moment to moment.) (Lau et al., 2006, p. 1452). Decentering consists of seven items that emphasize "awareness of one's experience with some distance and misidentification rather than being carried away by one's thoughts and feelings" (e.g., I experienced myself as separate from my changing thoughts and feelings.) (Lau et al., 2006, p. 1452). The TMS is scored on a five-point Likert-type scale ranging from 0 "not at all" to 4 "very much." Lau et al. (2006) found the coefficient alphas to be .93 for curiosity and .91 for decentering. In this study, I changed the Likert-

type scale to a range from 1 “not at all’ to 5 “very much” in order to make the calculations possible.

Cross-Cultural Experience (CCE)

Cross-cultural experience was measured by the length of time participants had spent working abroad. Participants were asked to provide information on the total duration in years that they had spent working outside of their own country. The question was developed based on the past-current-working dimension of international experience established by Takeuchi et al. (2005).

Cross-Cultural Training (CCT)

Cross-cultural training was measured as the extent to which it was Thai-culture-specific or applicable across different cultures (Earley & Ang, 2003; Thomas & Inkson, 2009). Participants were asked to provide information on the total number of times and duration in days spent participating in Thai-culture-specific trainings, as well as on the total number of times and duration in days spent participating in general culture trainings. Lastly, the participants were also asked to indicate their most recent Thai-culture-specific training and their most recent general culture training.

Openness to Experience

Openness to experience was measured by using the five-factor model of personality developed by Mowen and Spears (1999). The five-item openness to experience assesses individuals’ openness (e.g., are highly creative, find novel solutions) who are likely to be tolerant of ambiguity. The five-item openness to experience is scored

on nine-point Likert-type scale ranging from 1 “extremely inaccurate” to 9 “extremely accurate.” Mowen and Spears (1999) reported the coefficient alpha to be .84.

Expatriate Performance

Performance was measured using two instruments: (a) Black and Porter’s (1991) self-reported five-item Expatriate Task Performance Scale and (b) Caligiuri’s (1997) self-reported five-item Contextual Performance. The Expatriate Task Performance is measured by “asking participants to recall their most recent actual performance evaluation in their current assignment and to indicate where that rating would place them relative to their peers on a percentage basis along five dimensions” (e.g., completing tasks on time and achieving work goals) (Black & Porter, 1991, p. 103). Black and Porter (1991) reported the coefficient alphas to be between .89-.93. In this study, I changed the self-reported items on a percentage basis to a five-point Likert-type scale ranging from 1 “unsatisfactory or poor” to 5 “exceptional or outstanding.” Reliability tests were conducted based on this changed scale.

In addition, Caligiuri (1997) developed a self-rated performance measure that consists of four dimensions: (a) Overall Performance, (b) Technical Performance, (c) Contextual Performance, and (d) Expatriate Specific Performance. In this study, I selected Contextual Performance to measure expatriates’ performance because the Overall and Technical Performance are similar to the Expatriate Task Performance scale proposed by Black and Porter (1991). In addition, the Expatriate Specific Performance is designed to be specific for some job roles, such as managers. Therefore, the Expatriate

Specific Performance is not appropriate for the respondents of this study, who may not have managerial roles.

The Contextual Performance Measure assesses work performance that is not directly related to the expatriates' duties. It focuses on the expatriates' organizational citizenship behaviors (e.g., your ability to foster organizational commitment in the foreign subsidiary). This five-item Contextual Performance is scored on a five-point Likert-type scale ranging from 1 "unsatisfactory or poor" to 5 "exceptional or outstanding." Caligiuri (1997) reported the coefficient alpha to be .63.

Demographic Information

In addition, respondents were asked to provide some basic demographic information. The questions included: gender; age; nationality; educational level; whether their partner/spouse is of a different nationality; whether or not they grew up in a culture outside of at least one of their parents' original cultures; whether or not they were multilingual; perceived proficiency in host language; work status (part-full time), category of their institution; and school system.

Validity of the Measures

Validity refers to the extent to which an instrument measures the construct it is intended to measure (Cronbach & Meehl, 1955). The instruments employed in this study are all well-established and have been used in different cultures. To the best of my knowledge, this study is the only cultural intelligence investigation in a Thai context. Accordingly, I conducted Confirmatory Factor Analyses (CFAs) using the diagonally weighted least square estimation method to examine the dimensionality of all four

variables – CQ, mindfulness, openness to experience, and expatriate performance. Confirmatory Factor Analyses were conducted to examine whether the constructs in this study are composed of sub–dimensions as proposed. First, CQ is composed of four sub-dimensions – metacognitive, cognitive, motivational, and behavioral CQ – as introduced by Earley and Ang (2003). Second, mindfulness is composed of two sub-dimensions – curiosity and decentering – as suggested by Lau et al. (2006). Third, openness to experience is designed to measure one dimension. Lastly, performance is composed of two combined measures – expatriate task performance (Black & Porter, 1991) and contextual performance (Caligiuri, 1997).

The following fit indices were used to assess the fit of the models: (a) the comparative fit index (CFI), (b) the root mean square error of approximation (RMSEA), and (c) the standardized root mean square residual (SRMR) (Tabachnick & Fidell, 2007). A good-fitting model value of CFI is greater than .95. An RMSEA value of .06 or less indicates a good-fitting model. Lastly, an SRMR value of .08 or less is desired. The fit indices suggested good model fit for the four variables employed in this study. The model fit estimates for these four variables are presented in Table 3.2.

However, it is impossible to conduct CFAs with a single item on CCE and CCT. Accordingly, the items for these two variables were reviewed by the HRD subject matter experts. The HRD experts agreed that the items covered the concepts of cross-cultural experience and cross-cultural training. In other words, each item was shown to have face validity to what it purports to measure.

Table 3.2

Confirmatory Factor Analyses of Variables in the Study

Model	*df*	χ^2	χ^2/df	*p-value*	CFI	RMSEA (95%CI)	SRMR
Cultural Intelligence	164	316.967	1.93	0.00	0.992	0.037 (0.031-0.043)	0.054
Mindfulness	64	133.502	2.09	0.00	0.992	0.040 (0.031-0.050)	0.050
Openness to Experience	5	11.881	2.38	0.036	0.995	0.040 (0.00-0.069)	0.031
Expatriate Performance	34	97.041	2.85	0.00	0.991	0.051 (0.039-0.062)	0.049

Note. CFI = the comparative fit index; RMSEA = the root mean square error of approximation; CI = the confidence interval; SRMR = the standardized root mean square residual

Reliability of the Measures

Reliability is the extent to which measures the internal consistency of data on an instrument it is intended to measure. Though the instruments employed in this study are well-established and have been recognized in different cultures, I conducted reliability analyses by examining Cronbach's alpha coefficients to measure the consistency of the factors measured in a Thai context. Cronbach's alpha, α, is widely recognized as the most common measure of the degree of a factor's reliability. The acceptable value of Cronbach's alpha is around .70 (Field, 2009). In this study, Cronbach's alpha values for all instruments ranged from .80 to .94, which indicated that the data on the instruments measured have evidence of internal consistency reliability. The Cronbach's alpha values for the four variables are presented in Table 3.3.

Table 3.3
Reliability Analyses for the Measures of the Study

Measure	Number of Items	Cronbach's α
Overall Cultural Intelligence	20	0.94
Metacognitive CQ	4	0.80
Cognitive CQ	6	0.89
Motivational CQ	5	0.83
Behavioral CQ	5	0.84
Overall Mindfulness	13	0.93
Curiosity	6	0.89
Decentering	7	0.86
Openness to Experience	5	0.83
Overall Expatriate Performance	10	0.91
Task Performance	5	0.85
Contextual Performance	5	0.87

Data Analysis Methods

The quantitative data collected from the study were analyzed using the software packages RStudio 3.3.3 and SPSS 24.0. A three-step procedure was employed. First, confirmatory factor analyses (CFAs) were conducted, and Cronbach's alpha coefficients were measured. Second, the means and standard deviations of each of the variables were computed, and a Pearson correlation analysis was conducted to examine the relationships among the variables of the study. Third, a path analysis was employed to examine the sequences of relationships among the proposed variables in this study.

Confirmatory Factor Analysis

Confirmatory factor analysis (CFA) was conducted to examine the validity of the instruments used. Confirmatory factor analysis is a version of factor analysis in which

specific hypotheses are tested (Field, 2009). It helps researcher to better understand the structure and relations among variables in the study. The variables used in this study were all developed based on a priori theories and assumptions. Consequently, CFA was the appropriate method to test the structure and validity of those measures.

Examining Cronbach's Alpha Coefficients

Cronbach's alpha coefficients were measured in order to determine the reliability of the factors. This helps the researcher to estimate the internal consistency of the factors. A set of items in one variable should be closely related to one another (Field, 2009). A reliability coefficient of .70 or higher is desired.

Correlation Analysis

The means ($\bar{x}$) and standard deviations (*SD*) of each of the variables were computed, and a correlation analysis was conducted. Correlation analysis is a measure of the strength of association among the variables of a study (Field, 2009). The Pearson correlation coefficient, *r*, has a range of values from -1 to +1. Values of $\pm$.3 to $\pm$.5 show a medium association between two variables.

Path Analysis

Path analysis was employed to examine the sequences of relationships among the variables in this study. Path analysis is recognized as a technique for testing the directions of the relationships among a set of variables. Direct relationships between exogenous and endogenous variables can be examined through path analysis. Indirect relationships can also be examined. Researchers can use path analysis to examine the indirect effect of variable X on variable Y through a mediator. In addition, researchers can examine the

interaction of two variables through a moderating effect in a path model. Researchers can use path analysis to examine whether the effect of variable X on variable Y depends on a moderating variable. Combining mediation and moderation analyses in one path model is also a possible approach (Fairchild, MacKinnon, Taborga, & Taylor, 2009).

Path analysis assumptions were tested, including sample size, the absence of missing data, linearity, the absence of outliers, the absence of multicollinearity, homoscedasticity, and the normality of residuals (Cohen, Cohen, West, & Aiken, 2003; Tabachnick & Fidell, 2007). Next, the effect of CQ-employed mindfulness was examined to explore if mindfulness could explain additional variance in expatriate performance above and beyond the original four components of CQ. Lastly, a path analysis was employed to examine the relationships among CCE, CCTs in the Thai and in the general cultures, openness to experience, expatriate performance, and CQ. Cultural intelligence was considered a mediating variable between CCE and expatriate performance, as well as between CCTs and expatriate performance. Openness to experience was considered a moderating variable between CCE and CQ, as well as between CCTs and CQ. The hypothesized model of CQ is presented in Figure 3.1

As a result, the six proposed models differ with respect to how CQ and CCTs are measured, specifically how the two ways of measuring CQ (CQ and CQ-employed mindfulness) crossed with the three ways of measuring CCTs (the total number of times, the total number of days, and the most recent of CCTs).

1. Model of CQ using the total number of times for CCTs.
2. Model of CQ-employed mindfulness using the total number of times for CCTs.

3. Model of CQ using the total number of days for CCTs.
4. Model of CQ-employed mindfulness using the total number of days for CCTs.
5. Model of CQ using the most recent of CCTs
6. Model of CQ-employed mindfulness using the most recent of CCTs.

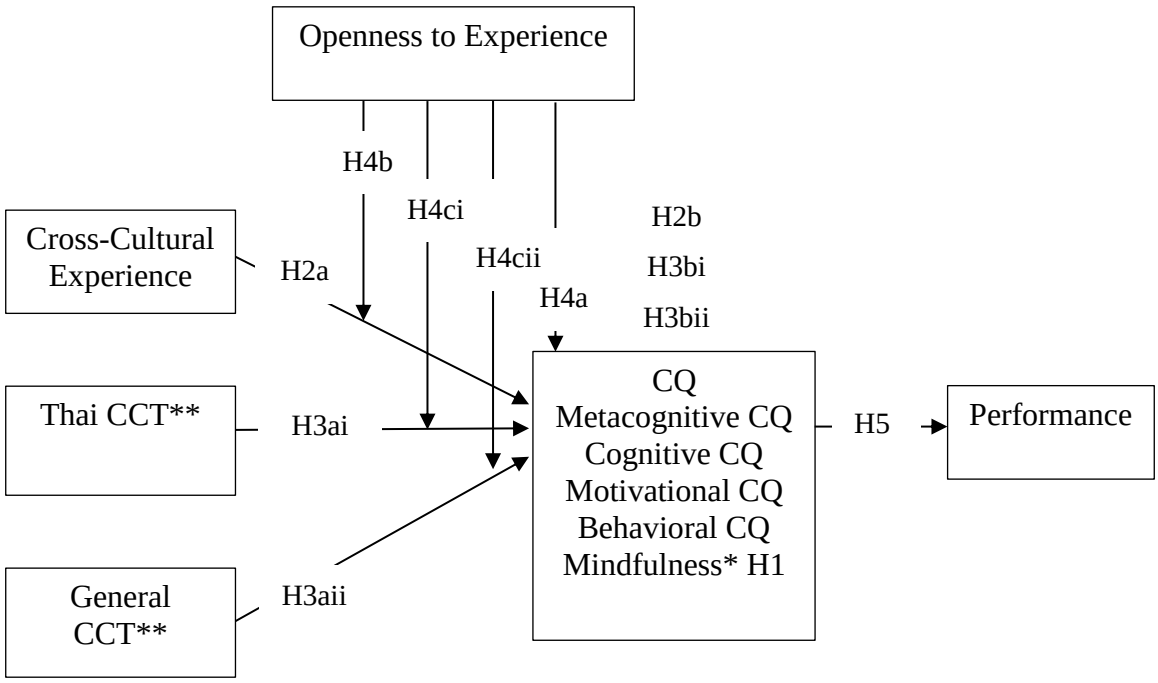

Figure 3.1. Hypothesized model of cultural intelligence as a mediator variable predicting the variable of expatriate performance.

Note. ***** The effect of CQ employed-mindfulness was examined in the separate models.
** Three different dimensions of both Thai and general CCTs were individually examined: (a) the total number of times for trainings, (b) the total number of days for trainings, and (c) the most recent of trainings.

Qualitative Data Analysis

The qualitative data collected from the study were analyzed using the two cycles coding method recommended by Miles, Huberman, and Saldana (2014). In addition to the quantitative data analysis, this study contained one open-ended question asking the

participants to provide information on how they were able to learn more about Thai culture. The purpose of this open-ended question was to gather more meaningful information and opinions on the learning of Thai culture from the actual experiences of overseas teachers in Thailand. There was a total of 65 participants who shared their opinions. Two cycles of coding – clustering and pattern coding – were used to analyze the information received from the participants (Miles et al., 2014): "First Cycle coding is a way to initially summarize segments of data. Pattern coding, as a Second Cycle method, is a way of grouping those summaries into a smaller number of categories, themes, or constructs" (Miles et al., 2014, p. 86). Hence, emerging themes of the findings are reported, and recurrent information is counted and presented.

Summary

In this chapter, I described the research design, participants and data collection procedure, demographic characteristics, and descriptive statistics. There was a total of 219 participants in this study. I also provided a description of the instruments and questions used to collect data in this study, together with the instruments' reliability and validity. Lastly, information about the methods employed for the data analyses was also provided. Chapter 4 describes the results of this study. Those results include the Pearson correlation analysis and path analysis as they were employed to explain the direction of variables in this study.

CHAPTER 4

RESULTS

This chapter presents the statistical analysis of the proposed variables using a sample of overseas teachers employed in international educational institutions in Thailand. The analyses of demographic characteristics and of the validity and reliability of the measurements were reported and discussed previously in the measures section. This chapter will report on the rest of the analyses – correlation and path. Correlations between variables used in the study are reported first. Second, path analysis assumptions of sample size, absence of missing data, linearity, absence of outliers, absence of multicollinearity, homoscedasticity, and normality of residuals were tested. Finally, path analyses were conducted, and the results from the analyses are presented.

Correlations

Means and standard deviations (*SD*) of the variables used in the study were calculated. Correlation analyses were examined between the variables of interest in the study. The Pearson correlation coefficient, *r*, has a range of values from -1 to +1. Values of $\pm$.3 to $\pm$.5 show a medium association between the two variables. The means, *SD*s, and correlation coefficients are presented in Table 4.1. Significant relationships were found among the variables used in the study. Of particular interest to the present study, CQ was found to be positively and significantly related to expatriate performance and openness to experience. Cultural intelligence was also found to be negatively and significantly related to the total number of times for Thai cross-cultural training (CCT)

Table 4.1

Means, Standard Deviations, and Correlations among Variables Used in the Study

Measure	*M*	*SD*	1	2	3	4	5	6	7	8	9	10	11
1. CCE	7.30	73.86	-	.28**	.32**	.40**	.18**	.09	.22**	-.12	-.05	**-.15***	-.08
2. NThCCT	1.41	2.39		-	.66**	.45**	.45**	.23**	.32**	-.14*	**-.16***	**-.20****	-.10
3. DThCCT	1.89	2.51			-	.59**	.42**	.48**	.47**	-.05	-.10	**-.14***	-.05
4. RThCCT	1.19	1.28				-	.27**	.17*	.46**	-.10	**-.14***	**-.18****	-.04
5. NGCCT	0.77	1.50					-	.56**	.58**	.04	-.09	-.10	-.03
6. DGCCT	1.68	3.41						-	.55**	.02	.05	.02	.01
7. RGCCT	0.77	1.10							-	-.05	-.05	-.07	-.01
8. OE	7.05	1.21								-	**.50****	**.57****	.49**
9. CQ	5.35	0.86									-	**.93****	**.48****
10. CQM	4.68	0.69										-	**.52****
11. PM	4.11	0.52											-

Note. CCE = Cross cultural experience; NThCCT = the total number of times for Thai cross-cultural trainings; DThCCT = the total number of days for Thai cross-cultural trainings; RThCCT = the participants' most recent Thai cross-cultural trainings; NGCCT = the total number of times for general cross-cultural trainings; DGCCT = the total number of days for general cross-cultural trainings; RGCCT = the participants' most recent general cross-cultural trainings; OE = Openness to experience; CQ = Cultural Intelligence; CQM = Cultural intelligence-employed mindfulness; PM = Expatriate performance *$p < .05$ **$p < .01$

and the most recent of Thai CCT. In addition, CQ-employed mindfulness was found to be positively and significantly related to expatriate performance and openness to experience. Cultural intelligence-employed mindfulness was also found to be negatively and significantly related to the cross cultural experience (CCE), the total number of times for Thai CCT, the total number of days for Thai CCT, and the most recent of Thai CCT.

Checking Path Analysis Assumptions

Every statistical analysis has its own assumptions that need to be met. Path analysis is not an exception. Testing statistical assumptions is necessary; it ensures that the results of the statistical analysis are more accurate and not misrepresentative. Path analysis assumptions include sample size, absence of missing data, linearity, absence of outliers, absence of multicollinearity, homoscedasticity, and normality of residuals (Tabachnick & Fidell, 2013).

Sample Size and Absence of Missing Data

The minimum sample size for this study was approximately 200 participants. The minimum sample size for the multiple regression was 104+8 = 112. The number was calculated based on the equation $N \geq 104 + m$ (where m is the number of independent variables: (1) CCE, (2) Thai CCT, (3) general CCT, (4) openness to experience, (5) CCE * openness to experiences, (6) Thai CCT * openness to experience, (7) general CCT * openness to experience, and (8) CQ) which is discussed by Tabachnick and Fidell (2013). Moreover, the minimum sample size for the path analysis is 200. The number was based on the estimates of bias for the component r^2 measures for mediation, which was discussed by Fairchild et al. (2009). Fairchild et al. (2009) conducted a research study

and found that there was no estimate of bias for r^2 measures exceeding .005 in any condition in which $N \geq 200$. In this study, the participants consisted of overseas teachers working at different international educational institutions in Thailand (N = 219). The number of international teachers in Thailand is limited. Accordingly, I decided to keep all 219 participants in this study. The missing values in the variables used in this study were replaced by their variable mean. Schafer and Graham (2002) suggested that averaging the available items is one of the reasonable methods to treat missing data.

Linearity

The assumption of linearity is that there is a straight-line relationship between each exogenous variable and the endogenous variable. A straight-line relationship between two variables can be assessed by inspecting bivariate scatterplots (Tabachnick & Fidell, 2013). In this study, the independent variables appeared to have a linear relationship with CQ, and CQ appeared to have a linear relationship with expatriate performance. The linearity between each exogenous variable and the endogenous variable are shown in Figures 4.1.1 to 4.9.2

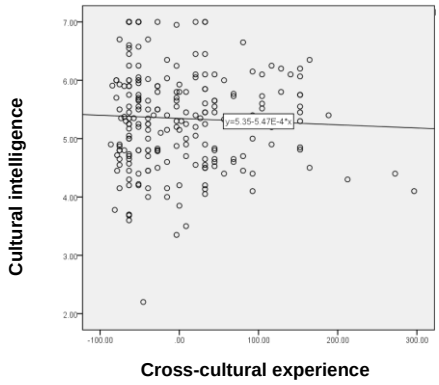

Figure 4.1.1 Scatterplot showing the relationship between CCE and CQ

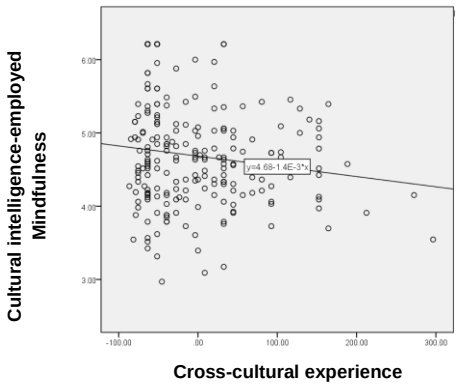

Figure 4.1.2 Scatterplot showing the relationship between CCE and CQ-employed mindfulness

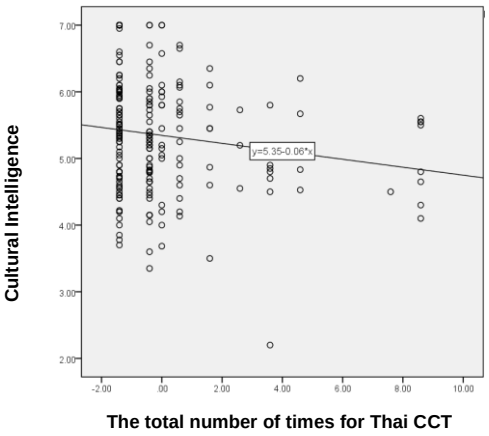

Figure 4.2.1 Scatterplot showing the relationship between the total number of times for Thai CCT and CQ

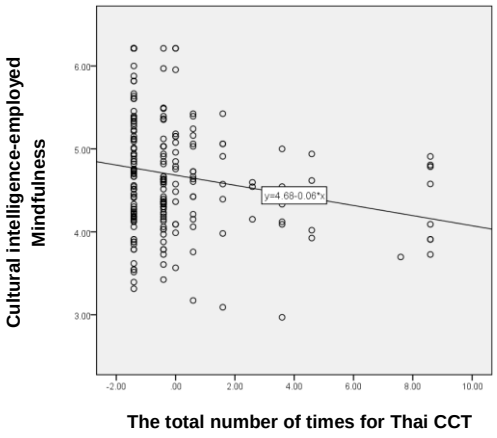

Figure 4.2.2 Scatterplot showing the relationship between the total number of times for Thai CCT and CQ-employed mindfulness

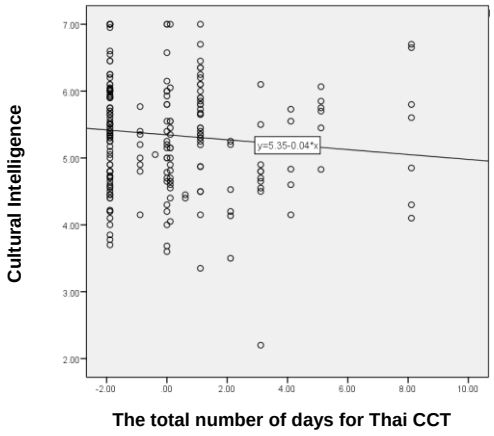

Figure 4.3.1 Scatterplot showing the relationship between the total number of days for Thai CCT and CQ

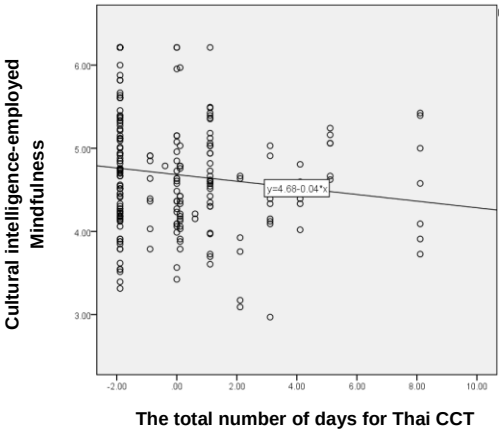

Figure 4.3.2 Scatterplot showing the relationship between the total number of days for Thai CCT and CQ-employed mindfulness

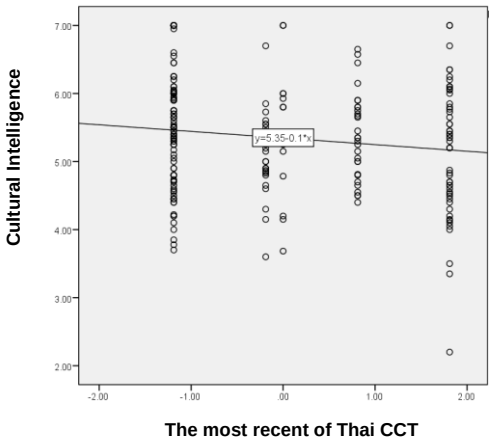

Figure4.4.1 Scatterplot showing the relationship between the most recent of Thai CCT and CQ

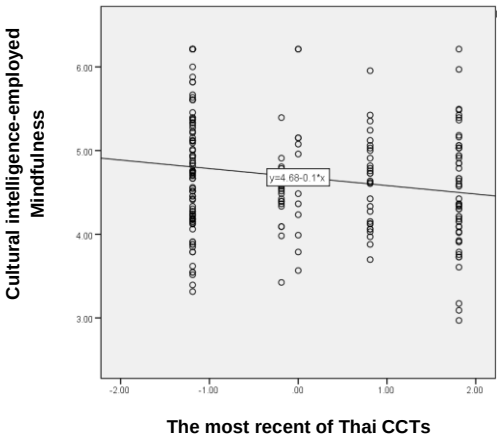

Figure 4.4.2 Scatterplot showing the relationship between the most recent of Thai CCT and CQ-employed mindfulness

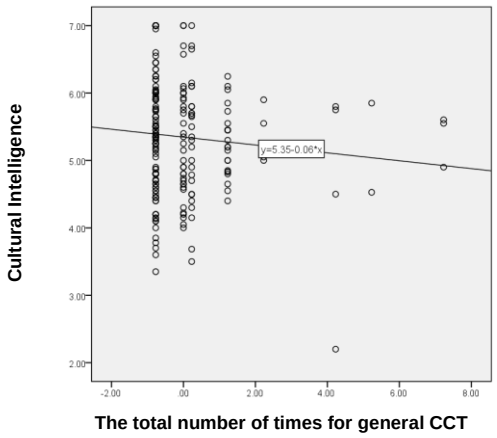

Figure 4.5.1 Scatterplot showing the relationship between the total number of times for general CCT and CQ

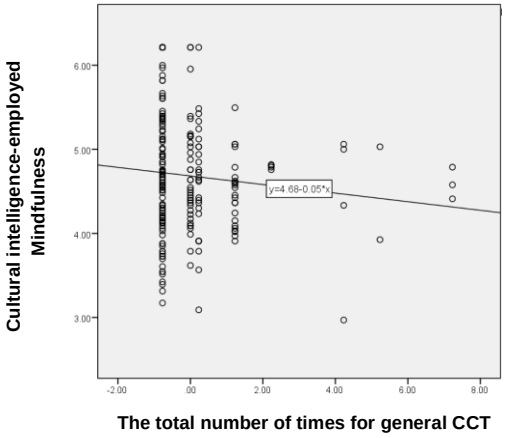

Figure 4.5.2 Scatterplot showing the relationship between the total number of times for general CCT and CQ-employed mindfulness

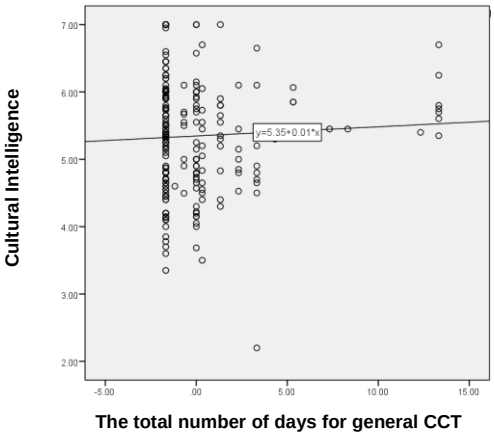

Figure 4.6.1 Scatterplot showing the relationship between the total number of days for general CCT and CQ

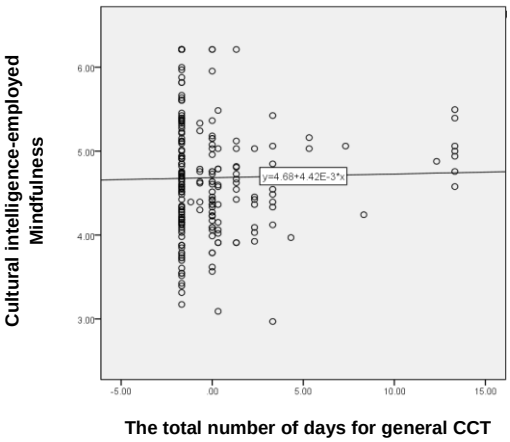

Figure 4.6.2 Scatterplot showing the relationship between the total number of days for general CCT and CQ-employed mindfulness

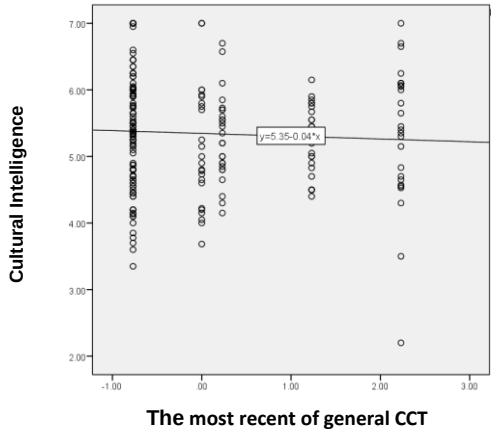

Figure 4.7.1 Scatterplot showing the relationship between the most recent of general CCT and CQ

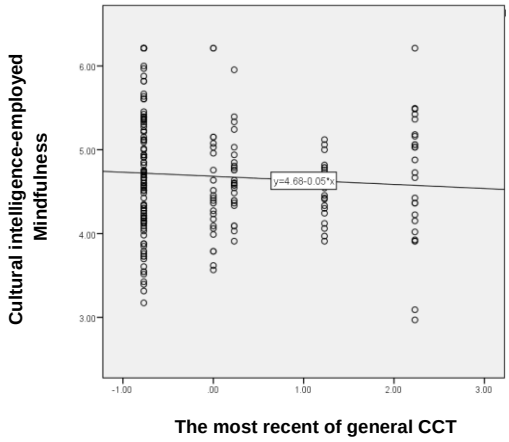

Figure 4.7.2 Scatterplot showing the relationship between the most recent of general CCT and CQ-employed mindfulness

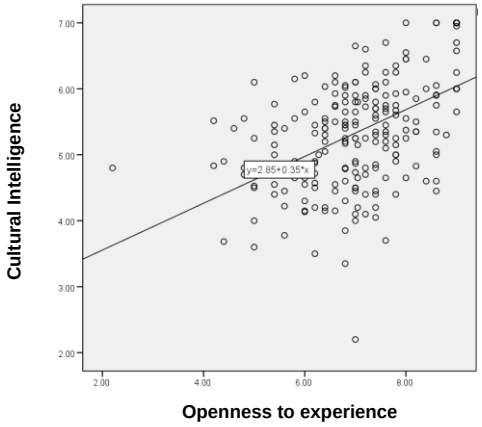

Figure 4.8.1 Scatterplot showing the relationship between openness to experience and CQ

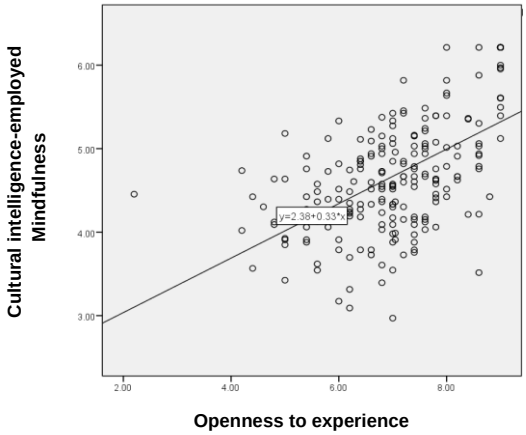

Figure 4.8.2 Scatterplot showing the relationship between openness to experience and CQ-employed mindfulness

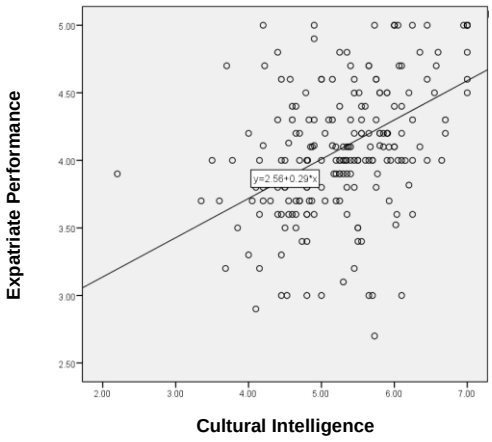

Figure 4.9.1 Scatterplot showing the relationship between CQ and expatriate performance

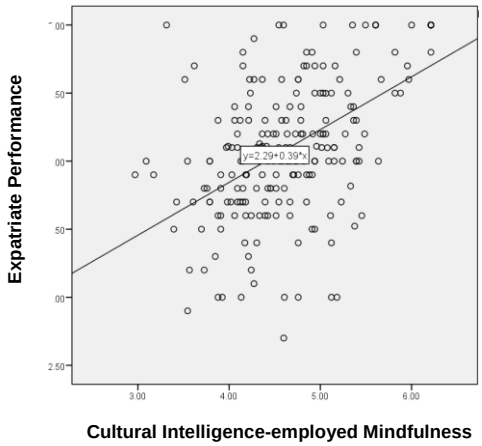

Figure 4.9.2 Scatterplot showing the relationship between CQ-employed mindfulness and expatriate performance

Absence of Outliers

Extreme cases in a data set may skew the results of a statistical analysis. Following Tabachnick and Fidell's (2013) extreme scores for different variables were replaced by the next-closest, high-frequency scores in the range.

Absence of Multicollinearity

Multicollinearity occurs when variables used in a study are too highly correlated (≥. 90) (Tabachnick & Fidell, 2013). The correlation matrix (Table 4.1) shows medium associations among the variables used in this study. The largest correction among the variables was .66, excluding the correlation between CQ and CQ with mindfulness (.93).

Tolerance statistics and variance inflation factor (VIF) values can also be used as indicators of multicollinearity (Cohen, Cohen, West, & Aiken, 2003). The tolerance statistic shows how much of the variance in one independent variable is not influenced by the other independent variables in the study. Multicollinearity is an issue if a tolerance value is equal to or less than 0.10. The variance inflation factor is the reciprocal of the tolerance statistics. A variance inflation factor of 10 or more provides evidence of multicollinearity. In this study, there is no issue with multicollinearity. The tolerance statistics and VIF values are shown in Tables 4.2 and 4.3.

Homoscedasticity

Homoscedasticity or homogeneity of variance means that "for any value of the independent variable X, the conditional variance of the residuals around the regression line in the population is assumed to be constant" (Cohen et al., 2003, p. 119). This constant variance of residuals can be assessed by plotting a scatterplot. If a scatterplot

illustrates uniform distribution on the values of the standardized predicted values against the standardized residuals, the assumption of homoscedasticity is met (Cohen et al., 2003; Kline, 2011). In this study, the scatter plots show that the assumption of homoscedasticity was met. The constant variance of residuals are shown in Figures 4.10.1 to 4.12.2.

Table 4.2
Collinearity Diagnostics for the Predictor Variables of Expatriate Performance, using CQ as a Mediator Variable

Variable	CCT - Time		CCT - Day		CCT - Recent	
	Tolerance	VIF	Tolerance	VIF	Tolerance	VIF
Cross-cultural experience	.832	1.20	.824	1.21	.771	1.30
The total number of times for Thai CCTs	.622	1.61	-	-	-	-
The total number of days for Thai CCTs	-	-	.648	1.54	-	-
The most recent of Thai CCTs	-	-	-	-	.647	1.55
The total number of times for general CCTs	.679	1.48	-	-	-	-
The total number of days for general CCTs	-	-	.677	1.48	-	-
The most recent of general CCTs	-	-	-	-	.749	1.34
Openness to experience	.709	1.41	.723	1.38	.728	1.37
Cultural Intelligence	.704	1.42	.695	1.44	.704	1.42

Note. CCT = Cross-cultural training

Table 4.3
Collinearity Diagnostics for the Predictor Variables of Expatriate Performance, using CQ-Employed Mindfulness as a Mediator Variable

Variable	CCT - Time		CCT - Day		CCT - Recent	
	Tolerance	VIF	Tolerance	VIF	Tolerance	VIF
Cross-cultural experience	.825	1.21	.815	1.23	.765	1.31
The total number of times for Thai CCTs	.619	1.61	-	-	-	-
The total number of days for Thai CCTs	-	-	.649	1.54	-	-
The most recent of Thai CCTs	-	-	-	-	.647	1.55
The total number of times for general CCTs	.680	1.47	-	-	-	-
The total number of days for general CCTs	-	-	.679	1.47	-	-
The most recent of general CCTs	-	-	-	-	.749	1.34
Openness to experience	.655	1.53	.664	1.51	.667	1.50
Cultural Intelligence	.627	1.60	.624	1.60	.628	1.59

Note. CCT = Cross-cultural training

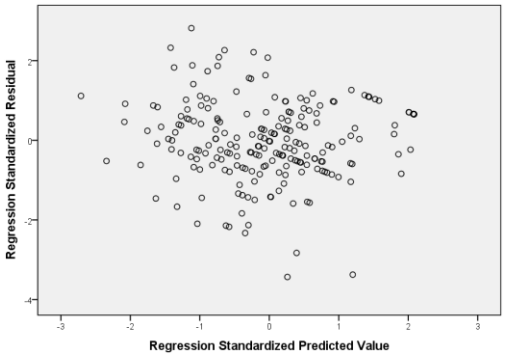

Figure 4.10.1 Scatterplot of standardized residuals in predicting expatriate performance *(using the model of the total number of times for CCTs and CQ)*

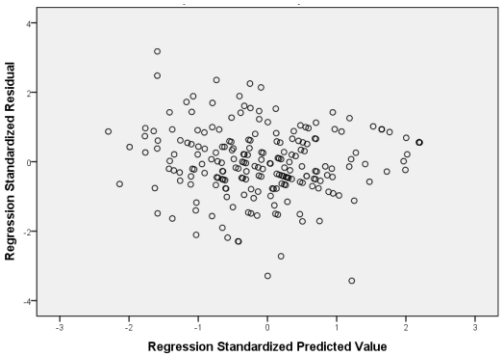

Figure 4.10.2 Scatterplot of standardized residuals in predicting expatriate performance *(using the model of the total number of times for CCTs and CQ-employed mindfulness)*

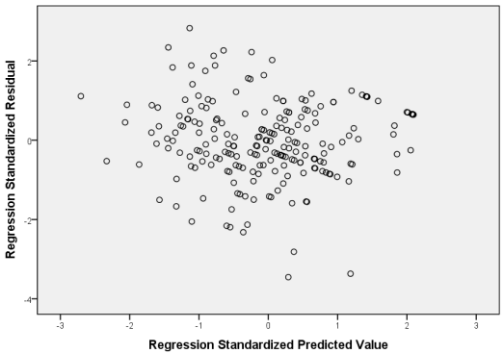

Figure 4.11.1 Scatterplot of standardized residuals in predicting expatriate performance *(using the model of the total number of days for CCTs and CQ)*

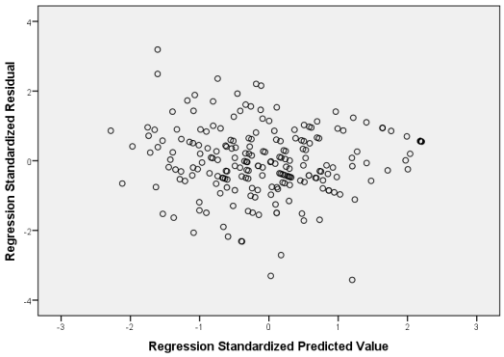

Figure 4.11.2 Scatterplot of standardized residuals in predicting expatriate performance *(using the model of the total number of days for CCTs and CQ-employed* mindfulness)

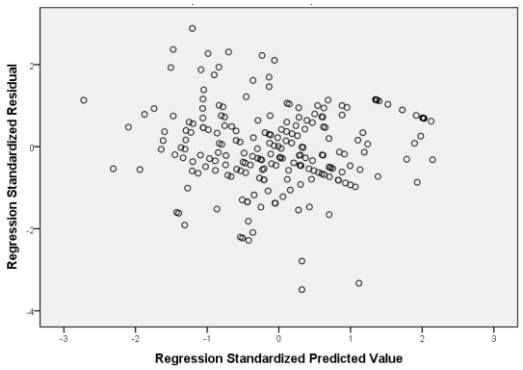

Figure 4.12.1 Scatterplot of standardized residuals in predicting expatriate performance *(using the model of the most recent of CCTs and CQ)*

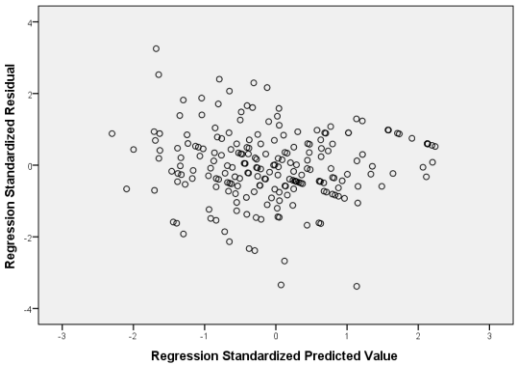

Figure 4.12.2 Scatterplot of standardized residuals in predicting expatriate performance *(using the model of the most recent of CCTs and CQ-employed mindfulness)*

Normality of Residuals

Another path analysis assumption is the normality of residuals. "The residuals around the regression line are assumed to have a normal distribution" (Cohen et al., 2003). This assumption was tested by examining the histogram and normal probability plot of the standardized residuals for each model (Figures 4.13.1 to 4.18.2).

Based on the statistics reported using the model of the total number of times for CCTs, both the histograms and normal probability plots show that residuals are non-normally distributed (Figures 4.13.1 to 4.14.2), but still in an acceptable range of the normally distributed. In the proposed model that uses CQ-only as a mediator variable, skewness (-.315, *SE* = .164) is $\leq$ 2 and kurtosis (1.012, *SE* = .327) is $\leq$ 7 (Tabachnick & Fidell, 2007). In the proposed model that uses CQ-employed mindfulness as a mediator variable, skewness (-.251, *SE* = .164) is $\leq$ 2 and kurtosis (1.127, *SE* = .327) is $\leq$ 7.

Based on the statistics reported using the model of the total number of days for CCTs, both the histograms and normal probability plots show that the residuals are non-normally distributed (Figures 4.15.1 to 4.16.2), but still in an acceptable range of the normally distributed. In the proposed model that uses CQ-only as a mediator variable, skewness (-.306, *SE* = .164) is ≤ 2 and kurtosis (1.023, *SE* = .327) is ≤ 7. In the proposed model that uses CQ-employed mindfulness as a mediator variable, skewness (-.245, *SE* = .164) is ≤ 2 and kurtosis (1.131, *SE* = .327) is ≤ 7.

Lastly, the normality of residual test using the model of the most recent of CCTs, both the histograms and normal probability plots show that residuals are non-normally distributed (Figure 4.17.1 to 4.18.2), but still in an acceptable range of the normally distributed. In the proposed model that uses CQ-only as a mediator variable, skewness (-.264, *SE* = .164) is ≤ 2 and kurtosis (1.078, *SE* = .327) is ≤ 7. In the proposed model that uses CQ-employed mindfulness as a mediator variable, skewness (-.200, *SE* = .164) is ≤ 2 and kurtosis (1.205, *SE* = .327) is ≤ 7.

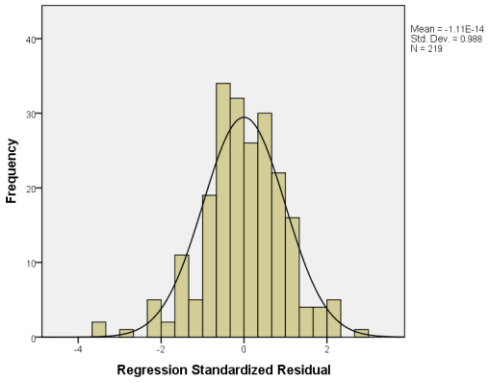

Figure 4.13.1. Histogram of standardized residuals in predicting expatriate performance *(using CQ as a mediator variable and the total number of times for CCTs)*

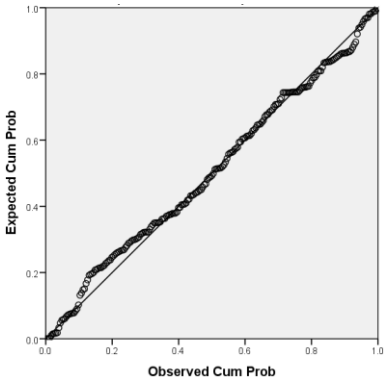

Figure 4.14.1. Normal P-P Plot of standardized residuals in predicting expatriate performance *(using CQ as a mediator variable and the total number of times for CCTs)*

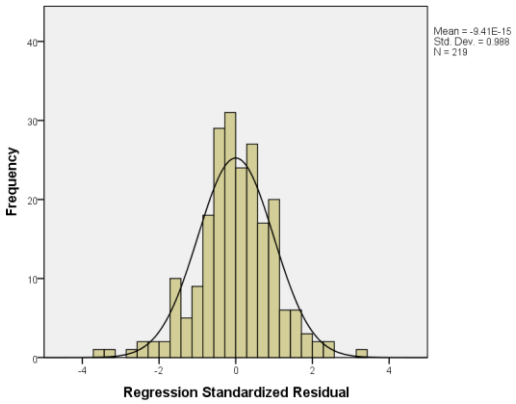

Figure 4.13.2. Histogram of standardized residuals in predicting expatriate performance *(using CQ-employed mindfulness as a mediator variable and the total number of times for CCTs)*

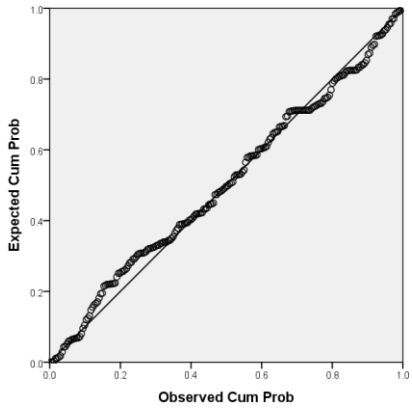

Figure 4.14.2. Normal P-P Plot of standardized residuals in predicting expatriate performance *(using CQ-employed mindfulness as a mediator variable and the total number of times for CCTs)*

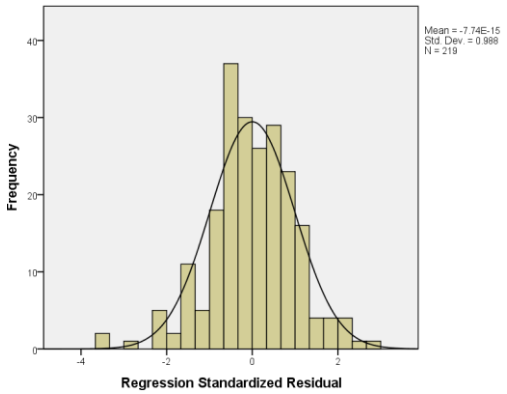

Figure 4.15.1. Histogram of standardized residuals in predicting expatriate performance *(using CQ as a mediator variable and the total number of days for CCTs)*

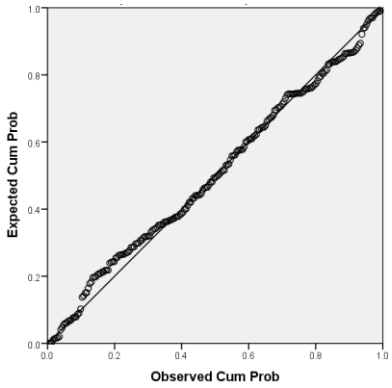

Figure 4.16.1. Normal P-P Plot of standardized residuals in predicting expatriate performance *(using CQ as a mediator variable and the total number of days for CCTs)*

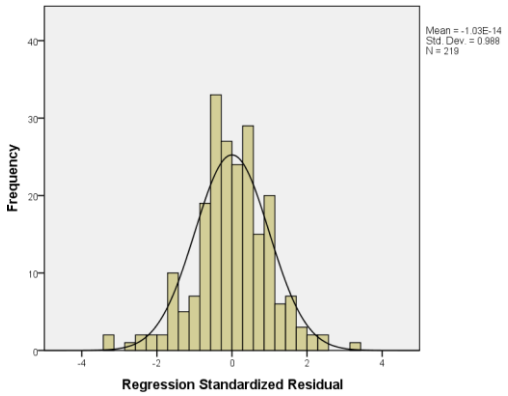

Figure 4.15.2. Histogram of standardized residuals in predicting expatriate performance *(using CQ-employed mindfulness as a mediator variable and the total number of days for CCTs)*

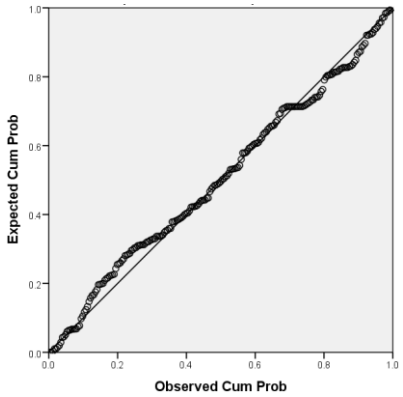

Figure 4.16.2. Normal P-P Plot of standardized residuals in predicting expatriate performance *(using CQ-employed mindfulness as a mediator variable and the total number of days for CCTs)*

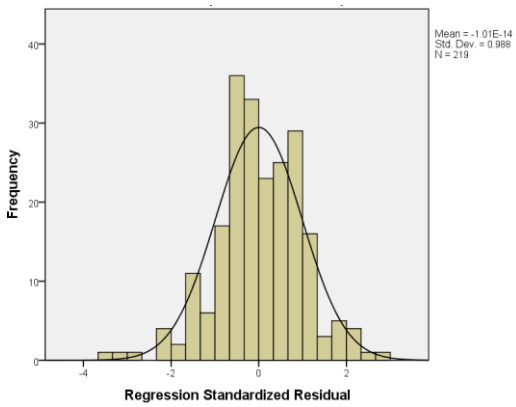

Figure 4.17.1. Histogram of standardized residuals in predicting expatriate performance *(using CQ as a mediator variable and the most recent of CCTs)*

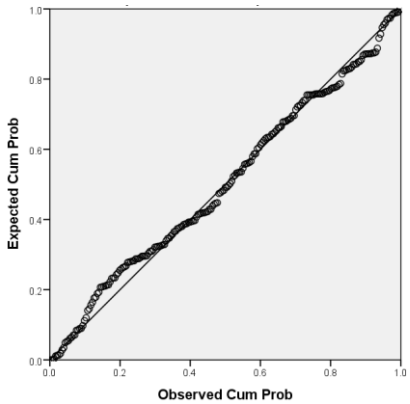

Figure 4.18.1. Normal P-P Plot of standardized residuals in predicting expatriate performance *(using CQ as a mediator variable and the most recent of CCTs)*

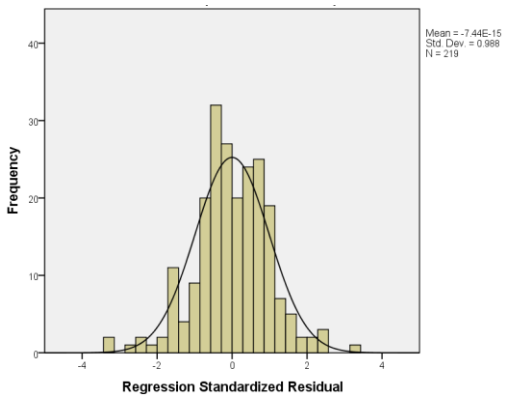

Figure 4.17.2. Histogram of standardized residuals in predicting expatriate performance *(using CQ-employed mindfulness as a mediator variable and the most recent of CCTs)*

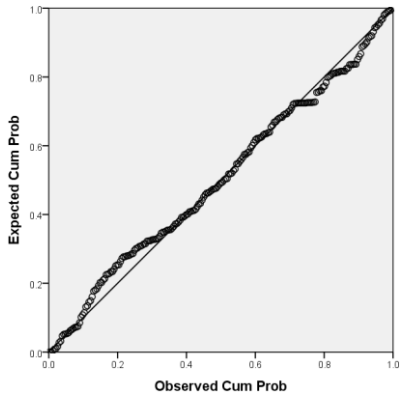

Figure 4.18.2. Normal P-P Plot of standardized residuals in predicting expatriate performance *(using CQ-employed mindfulness as a mediator variable and the most recent of CCTs)*

Path Analyses

Path analyses were performed using the maximum likelihood method with the bootstrap method. Path analyses were conducted to test three different proposed models that use CQ-only as a mediator variable: (a) using the total numbers of times for Thai CCTs and general CCTs, (b) using the total numbers of days for Thai CCTs and general CCTs, and (c) using the most recent of Thai CCTs and general CCTs. The values of the fit indexes and the effects of path coefficients in the models predicting expatriate performance are reported. Second, path analyses were performed to test three different proposed models that use CQ-employed mindfulness as a mediator variable. The results of the fit indexes and the effects are reported. The following fit indexes were used to assess the fit of the models: (a) the comparative fit index (CFI), where values greater than .95 indicates a good-fitting model; (b) the root mean square error of approximation (RMSEA), where a value of .06 or less indicates a good-fitting model; and (c) the

standardized root mean square residual (SRMR), where a value of .08 or less indicates a plausible fit (Tabachnick & Fidell, 2007). Lastly, the differences between the proposed models that use CQ-only as a mediator variable and the proposed models that use CQ-employed mindfulness as a mediator variable are presented.

Testing the Models that Use CQ-only as a Mediator Variable

The proposed models that use CQ-only as a mediator variable were tested using the number of times for CCTs, the number of days for CCTs, and how recently the trainings were taken.

Using the number of times for CCTs. A path analysis was conducted to examine the values of the model fit and the effects of path coefficients in the model predicting expatriate performance. The path model (Figure 4.19) showed the fit indexes of the observed data χ^2 (4, N = 219) = 26.10, $p < .05$, CFI = .94, RMSEA = .159 with 90% CI [.104, .219], SRMR = .034. Although some fit indexes did not meet the criteria, adding path regression lines to support the model fit was outside of the scope of this study. Parameter estimates (unstandardized and standardized) of direct effects, as well as standardized estimates of indirect and total effects, are presented in Table 4.4.

Three paths were found statistically significant at $p < .05$. In particular, openness to experience directly predicted CQ. The interaction between the CCE and openness to experience directly predicted CQ. And, CQ directly predicted expatriate performance. Around one fourth (23.6%) of variance of expatriate performance was explained by variables in the model. Lastly, among participants with low openness to experience (participants at the 25th percentile – mean score of 6.28 – or lower on the openness scale),

the relationship between CCE and CQ was found to be positive and significant; whereas, among participants with high openness to experience (participants at the 75th percentile – mean score of 7.80 – or higher on the openness scale), the relationship between CCE and CQ was found to be negative and significant.

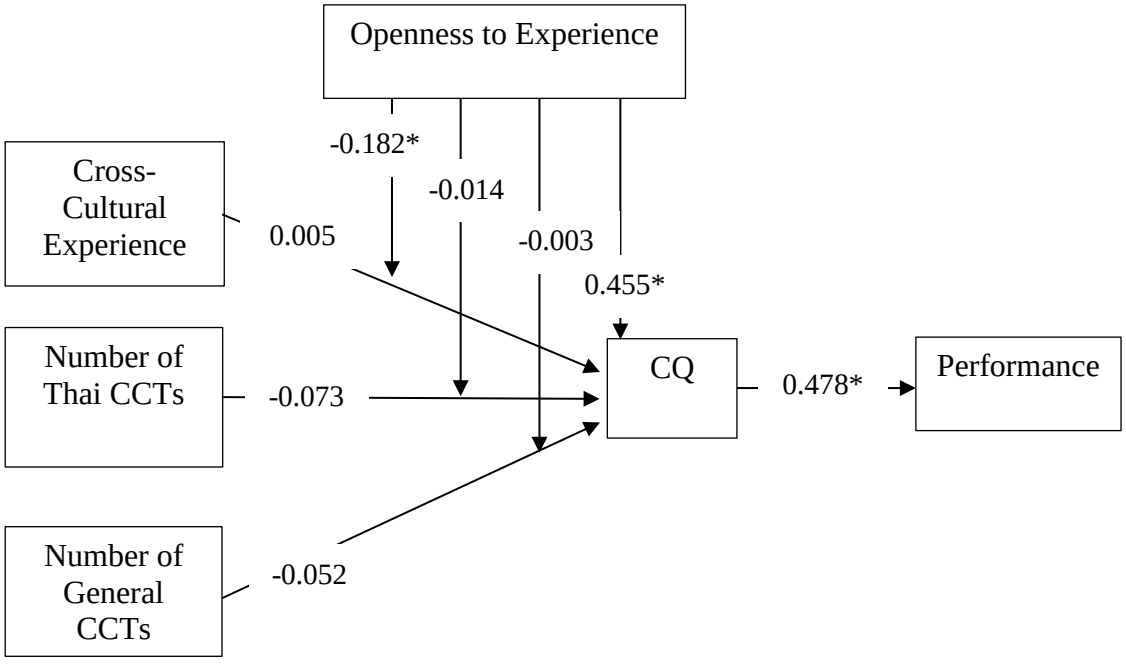

Figure 4.19. A path model on CQ as a mediator variable predicting the variable of expatriate performance using the number of times for CCTs. (*$p < .05$)

Table 4.4.
Direct, Indirect, and Total Effects of Path Coefficients in the Model, using CQ as a Mediator Variable to Predict Expatriate Performance, in which CCTs are measured as the Total Number of Times

Parameter estimates	Direct effects			Standardized indirect effects	Standardized total effects
	Unstandardized	SE	Standardized		
Path coefficients					
CCE → CQ	0.000	0.001	0.005	-	0.005
NThCCT → CQ	-0.027	0.027	-0.073	-	-0.073
NGCCT → CQ	-0.033	0.056	-0.052	-	-0.052
OE → CQ	0.323*	0.045	0.455	-	0.455
CCE*OE → CQ	-0.002*	0.001	-0.182	-	-0.182
NThCCT*OE → CQ	-0.005	0.026	-0.014	-	-0.014
NGCCT*OE → CQ	-0.002	0.045	-0.003	-	-0.003
CCE → PM	-0.000	0.001	-0.062	0.000	-0.062
NThCCT → PM	-0.005	0.014	-0.023	-0.008	-0.031
NGCCT → PM	0.013	0.022	0.033	-0.009	0.024
CQ → PM	0.288*	0.036	0.478	-	0.478

Note. CCE = Cross cultural experience; NThCCT = the total number of Thai cross-cultural trainings; NGCCT = the total number of general cross-cultural trainings; OE = Openness to experience; CQ = Cultural Intelligence; PM = Expatriate performance *$p < .05$

Figure 4.20 shows the interaction between the CCE and openness to experience on CQ. Participants with low openness to experience with high CCE had higher CQ score than participants with low openness to experience and low CCE. And, participants with high openness to experience with low CCE had higher CQ score than participants with low openness to experience with the same level of CCE. In addition, participants with high openness to experience with low CCE had higher CQ score than participants with high openness to experience with high CCE. Lastly, participants with low openness to

experience with high CCE had higher CQ score than participants with high openness to experience with high CCE.

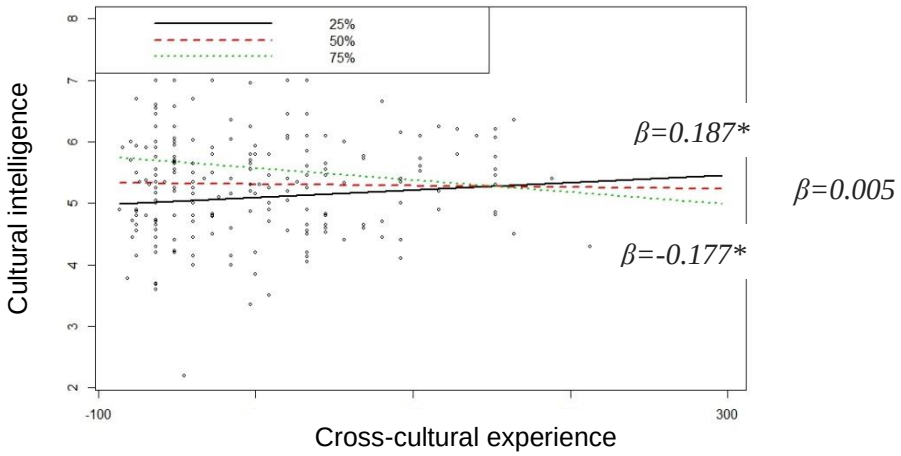

Figure 4.20. Interaction effect of cross-cultural experience and openness to experience on CQ (using the number of times for CCTs) (*$p < .05$)

Using the number of days for CCTs. A path analysis was conducted to examine the values of the model fit and the effects of path coefficients in the model predicting expatriate performance. The path model (Figure 4.21) showed the fit indexes of the observed data χ^2 (4, N = 219) = 25.44, $p < .05$, CFI = .94, RMSEA = .156 with 90% CI [.102, .217], SRMR = .035. Although some fit indexes did not meet the criteria, adding path regression lines to support the model fit was outside of the scope of this study. Parameter estimates (unstandardized and standardized) of direct effects, as well as standardized estimates of indirect and total effects, are presented in Table 4.5.

Five paths were found statistically significant at $p < .05$. In particular, the number of days for general CCTs directly predicted CQ. Openness to experience also directly predicted CQ. And, the interaction between the CCE and openness to experience directly

predicted CQ. Another path suggests that CQ directly predicted performance. And, the number of days for general CCTs indirectly predicted performance through CQ. Around one fourth (23.7%) of variance of expatriate performance was explained by variables in the model. Lastly, among participants with low openness to experience (participants at the 25th percentile – mean score of 6.28 – or lower on the openness scale), the relationship between CCE and CQ was found to be positive and significant; whereas, among participants with high openness to experience (participants at the 75th percentile – mean score of 7.80 – or higher on the openness scale), the relationship between CCE and CQ was found to be negative and significant. Figure 4.22 shows the interaction between the CCE and openness to experience on CQ.

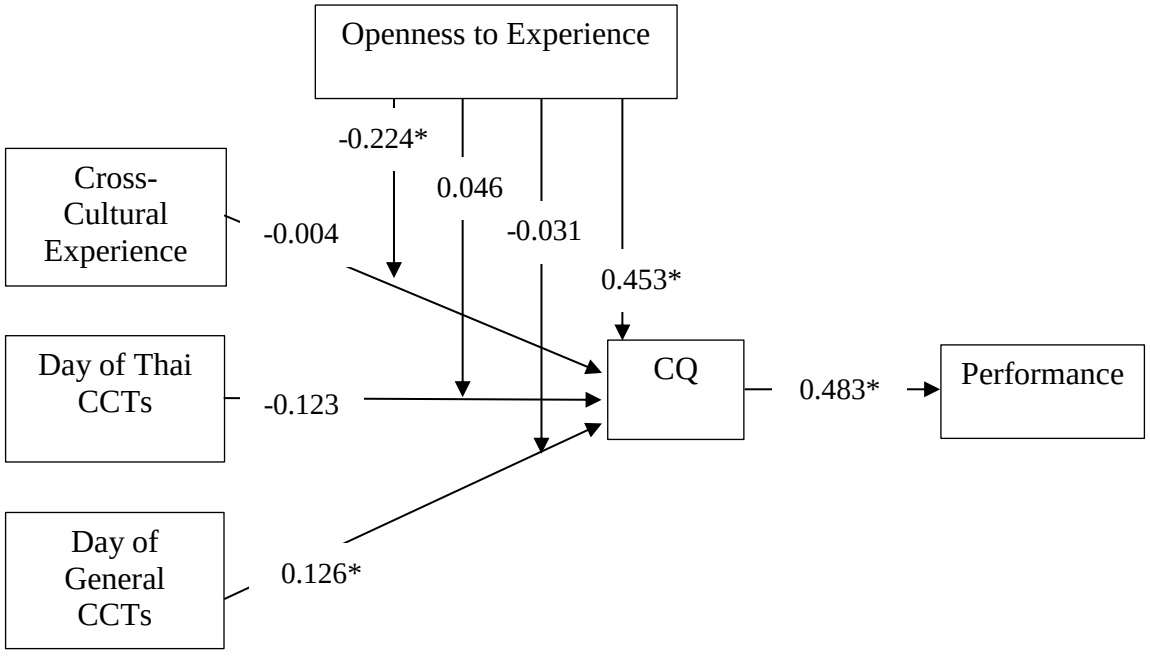

Figure 4.21. A path model on CQ as a mediator variable predicting the variable of expatriate performance using the number of days for CCTs (*$p < .05$)

Table 4.5.
Direct, Indirect, and Total Effects of Path Coefficients in the Model, using CQ as a Mediator Variable to Predict Expatriate Performance, in which CCTs are measured as the Total Number of Days

Parameter estimates	Direct effects			Standardized indirect effects	Standardized total effects
	Unstandardized	SE	Standardized		
Path coefficients					
CCE ⟶ CQ	-0.000	0.001	-0.004	-	-0.004
DThCCT⟶CQ	-0.044	0.027	-0.123	-	-0.123
DGCCT ⟶ CQ	0.034*	0.015	0.126	-	0.126
OE ⟶ CQ	0.322*	0.045	0.453	-	0.453
CCE*OE ⟶ CQ	-0.002*	0.001	-0.224	-	-0.224
DThCCT*OE⟶CQ	0.015	0.024	0.046	-	0.046
DGCCT*OE ⟶ CQ	-0.007	0.013	-0.031	-	-0.031
CCE ⟶ PM	-0.001	0.001	-0.072	-0.0000	-0.072
DThCCT⟶PM	0.009	0.015	0.043	-0.0130	0.03
DGCCT ⟶ PM	-0.005	0.010	-0.033	0.010*	-0.023
CQ ⟶ PM	0.292*	0.038	0.483	-	0.483

Note. CCE = Cross cultural experience; DThCCT = the total number of days for Thai cross-cultural trainings; DGCCT = the total number of days for general cross-cultural trainings; OE = Openness to experience; CQ = Cultural Intelligence; PM = Expatriate performance *$p < .05$

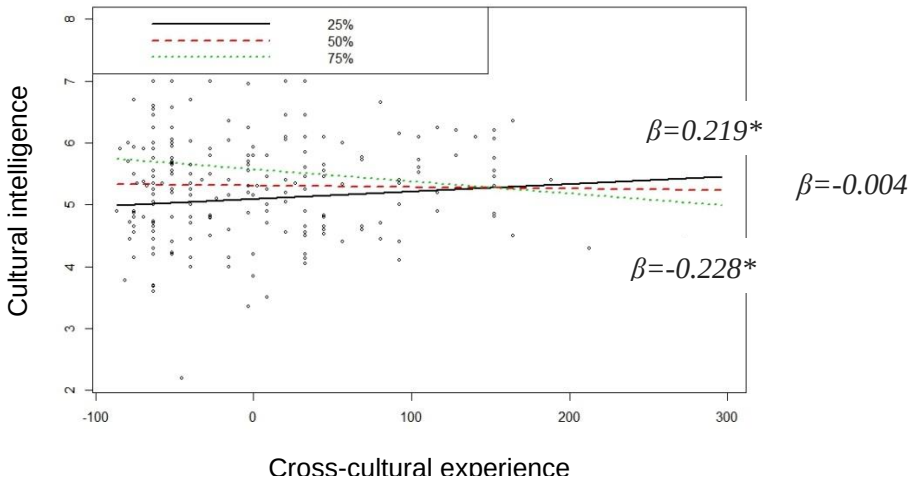

Figure 4.22. Interaction effect of cross-cultural experience and openness to experience on CQ (using the number of days for CCTs) (*$p < .05$)

Using the most recent of CCTs. A path analysis was conducted to examine the values of the model fit and the effects of path coefficients in the model predicting expatriate performance. The path model (Figure 4.23) showed the fit indexes of the observed data χ^2 (4, N = 219) = 25.90, p < .05, CFI = .95, RMSEA = .158 with 90% CI [.104, .219], SRMR = .035. Although some fit indexes did not meet the criteria, adding path regression lines to support the model fit was outside of the scope of this study. Parameter estimates (unstandardized and standardized) of direct effects, as well as standardized estimates of indirect and total effects, are presented in Table 4.6.

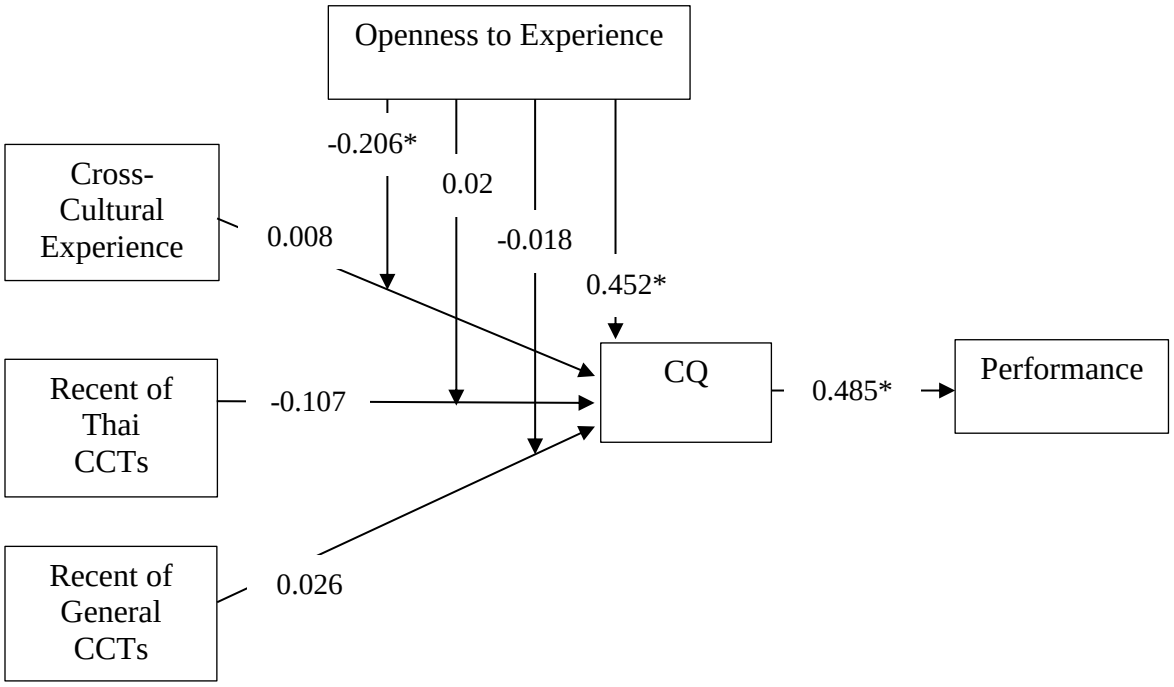

Figure 4.23. A path model on CQ as a mediator variable predicting the variable of expatriate performance using the most recent of CCTs (*p < .05)

Three paths were found statistically significant at p < .05. In particular, openness to experience directly predicted CQ. The interaction between the CCE and openness to experience directly predicted CQ. And, CQ directly predicted expatriate performance.

Around one fourth (23.8%) of variance of expatriate performance was explained by variables in the model. Lastly, among participants with low openness to experience (participants at the 25th percentile – mean score of 6.28 – or lower on the openness scale), the relationship between CCE and CQ was found to be positive and significant; whereas, among participants with high openness to experience (participants at the 75th percentile – mean score of 7.80 – or higher on the openness scale), the relationship between CCE and CQ was found to be negative and significant. Figure 4.24 shows the interaction between the CCE and openness to experience on CQ.

Table 4.6.
Direct, Indirect, and Total Effects of Path Coefficients in the Model, using CQ as a Mediator Variable to Predict Expatriate Performance, in which CCTs are measured as the Most Recent of Training

Parameter estimates	Direct effects			Standardized indirect effects	Standardized total effects
	Unstandardized	SE	Standardized		
Path coefficients					
CCE ⟶ CQ	0.000	0.001	0.008	-	0.008
RThCCT⟶CQ	-0.074	0.055	-0.107	-	-0.107
RGCCT ⟶ CQ	0.021	0.062	0.026	-	0.026
OE ⟶ CQ	0.322*	0.046	0.452	-	0.452
CCE*OE ⟶ CQ	-0.002*	0.001	-0.206	-	-0.206
RThCCT*OE⟶CQ	0.016	0.050	0.028	-	0.028
RGCCT*OE ⟶ CQ	-0.012	0.052	-0.018	-	-0.018
CCE⟶ PM	-0.001	0.001	-0.086	0.000	-0.086
RThCCT ⟶PM	0.024	0.030	0.057	-0.022	0.035
RGCCT ⟶ PM	0.003	0.032	0.007	0.006	0.013
CQ ⟶ PM	0.293*	0.038	0.485	-	0.485

Note. CCE = Cross cultural experience; RThCCT = the most recent of Thai cross-cultural trainings; RGCCT = the most recent of general cross-cultural trainings; OE = Openness to experience; CQ = Cultural Intelligence; PM = Expatriate performance *$p < .05$

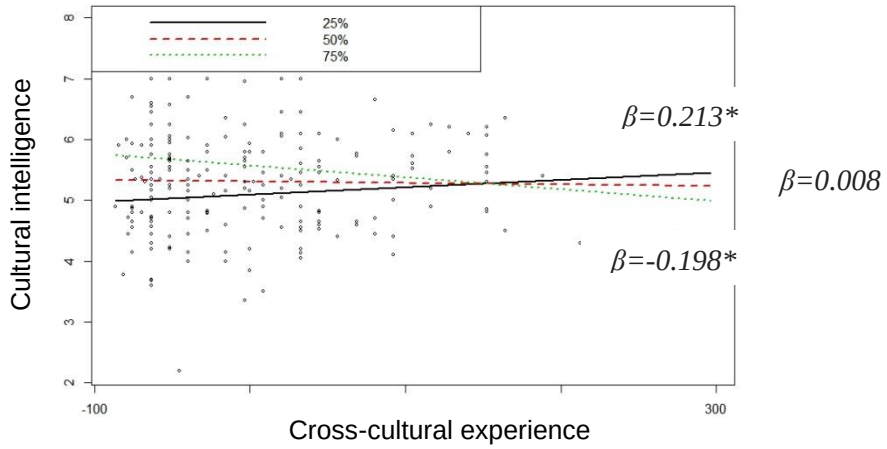

Figure *4.24*. Interaction effect of cross-cultural experience and openness to experience on CQ (using the most recent of CCTs) (*$p < .05$)

Testing the Models that Use CQ-Employed Mindfulness as a Mediator Variable

The proposed models that use CQ-employed mindfulness as a mediator variable were tested using the number of times for CCTs, the number of days for CCTs, and how recently the trainings were taken.

Using the number of times for CCTs. Path analysis was conducted to examine the values of the model fit and the effects of path coefficients in the model predicting expatriate performance. The path model (Figure 4.25) showed the fit indexes of the observed data χ^2 (4, N = 219) = 19.527, $p < .05$, CFI = .961, RMSEA = .133 with 90% CI [.078, .195], SRMR = .028. Although some fit indexes did not meet the criteria, adding path regression lines to support the model fit was outside of the scope of this study. Parameter estimates (unstandardized and standardized) of direct effects, as well as standardized estimates of indirect and total effects, are presented in Table 4.7.

Three paths were found statistically significant at $p < .05$. In particular, openness to experience directly predicted CQ. The interaction between the CCE and openness to

experience directly predicted CQ. And, CQ directly predicted expatriate performance. More than one fourth (27.1 %) of variance of expatriate performance was explained by variables in the model. Lastly, among participants with low openness to experience (participants at the 25th percentile – mean score of 6.28 – or lower on the openness scale), the relationship between CCE and CQ was found to be positive and significant; whereas, among participants with high openness to experience (participants at the 75th percentile – mean score of 7.80 – or higher on the openness scale), the relationship between CCE and CQ was found to be negative and significant.

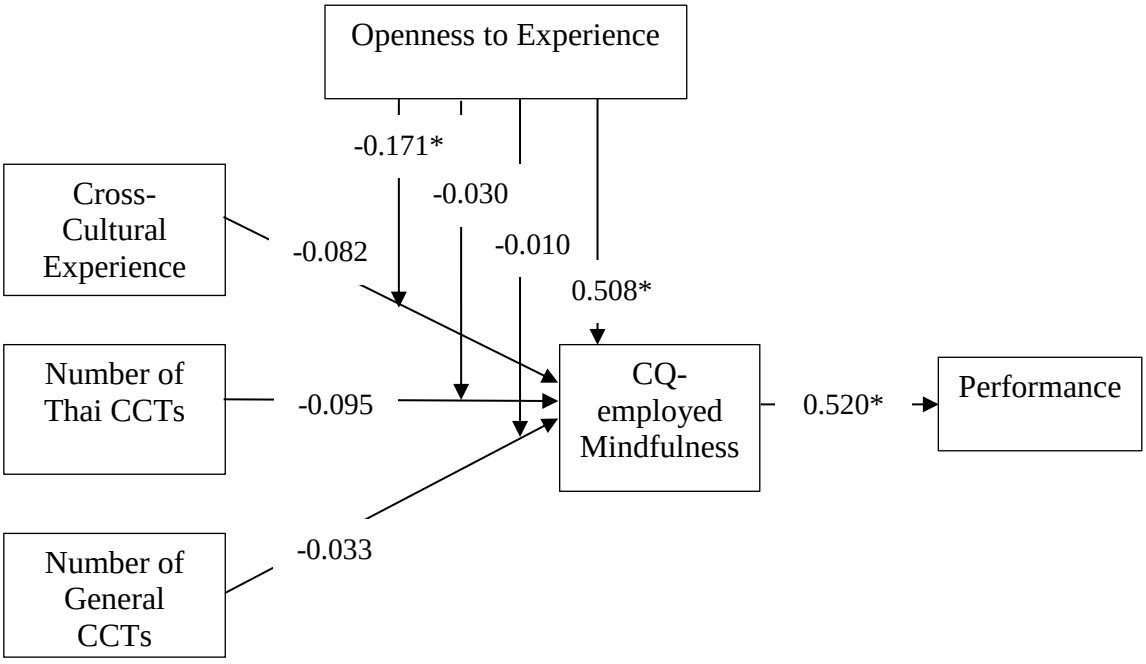

Figure 4.25. A path model on CQ-employed mindfulness as a mediator variable predicting the variable of expatriate performance using the number of times for CCTs (*$p < .05$)

Table 4.7.
Direct, Indirect, and Total Effects of Path Coefficients in the Mode, using CQ-Employed Mindfulness as a Mediator Variable to Predict Expatriate Performance, in which CCTs are measured as the Total Number of Times

Parameter estimates	Direct effects			Standardized indirect effects	Standardized total effects
	Unstandardized	SE	Standardized		
Path coefficients					
CCE ⟶ CQM	-0.001	0.001	-0.082	-	-0.082
NThCCT ⟶ CQM	-0.029	0.021	-0.095	-	-0.095
NGCCT ⟶ CQM	-0.017	0.036	-0.033	-	-0.033
OE ⟶ CQM	0.292*	0.038	0.508	-	0.508
CCE*OE ⟶ CQM	-0.001*	0.001	-0.171	-	-0.171
NThCCT*OE ⟶ CQM	-0.008	0.019	-0.030	-	-0.030
NGCCT*OE ⟶ CQM	-0.005	0.033	-0.010	-	-0.010
CCE ⟶ PM	-0.000	0.001	-0.011	-0.000	-0.011
NThCCT ⟶ PM	-0.001	0.013	-0.004	-0.011	-0.015
NGCCT ⟶ PM	0.009	0.020	0.024	-0.007	0.017
CQM ⟶ PM	0.388*	0.047	0.520	-	0.520

Note. CCE = Cross cultural experience; NThCCT = the total number of Thai cross-cultural trainings; NGCCT = the total number of general cross-cultural trainings; OE = Openness to experience; CQM = Cultural intelligence-employed mindfulness; PM = Expatriate performance *$p < .05$

Figure 4.26 shows the interaction between the CCE and openness to experience on CQ. Participants with low openness to experience with high CCE had higher CQ score than participants with low openness to experience and low CCE. And, participants with high openness to experience with low CCE had higher CQ score than participants with low openness to experience with the same level of CCE. In addition, participants with high openness to experience with low CCE had higher CQ score than participants with high openness to experience with high CCE. Lastly, participants with low openness to

experience with high CCE had higher CQ score than participants with high openness to experience with high CCE.

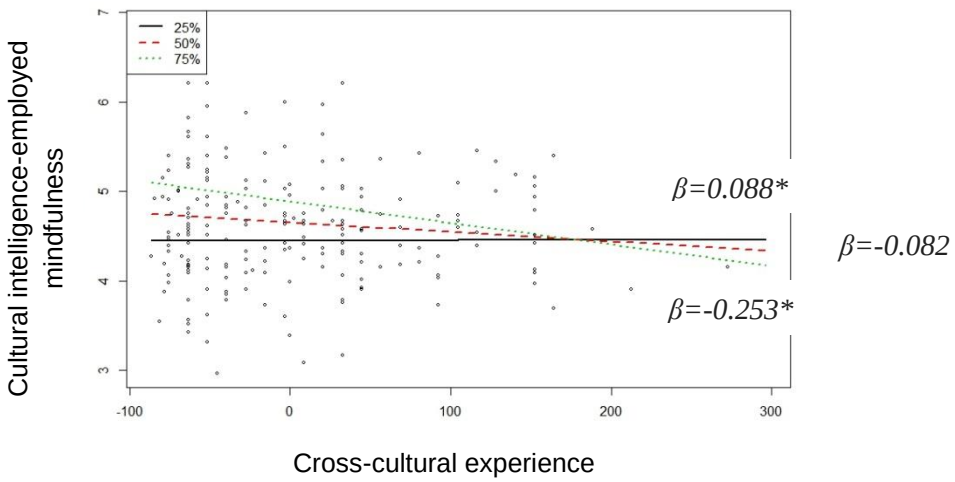

Figure 4.26. Interaction effect of cross-cultural experience and openness to experience on CQ-employed mindfulness (using the number of times for CCTs) (*$p < .05$)

Using the number of days for CCTs. A path analysis was conducted to examine the values of the model fit and the effects of path coefficients in the model predicting expatriate performance. The path model (Figure 4.27) showed the fit indexes of the observed data χ^2 (4, N = 219) = 18.523, $p < .05$, CFI = .965, RMSEA = .129 with 90% CI [.073, .191], SRMR = .028. Although some fit indexes did not meet the criteria, adding path regression lines to support the model fit was outside of the scope of this study. Parameter estimates (unstandardized and standardized) of direct effects, as well as standardized estimates of indirect and total effects, are presented in Table 4.8.

Four paths were found statistically significant at $p < .05$. In particular, the number of days for general CCTs directly predicted CQ. Openness to experience also directly predicted CQ. And, the interaction between the CCE and openness to experience

directly predicted CQ. Another path suggests that CQ directly predicted performance. More than one fourth (27.2 %) of variance of performance was explained by variables in the model. Lastly, among participants with low openness to experience (participants at the 25th percentile – mean score of 6.28 – or lower on the openness scale), the relationship between CCE and CQ was found to be positive and significant; whereas, among participants with high openness to experience (participants at the 75th percentile – mean score of 7.80 – or higher on the openness scale), the relationship between CCE and CQ was found to be negative and significant. Figure 4.28 shows the interaction between the CCE and openness to experience on CQ.

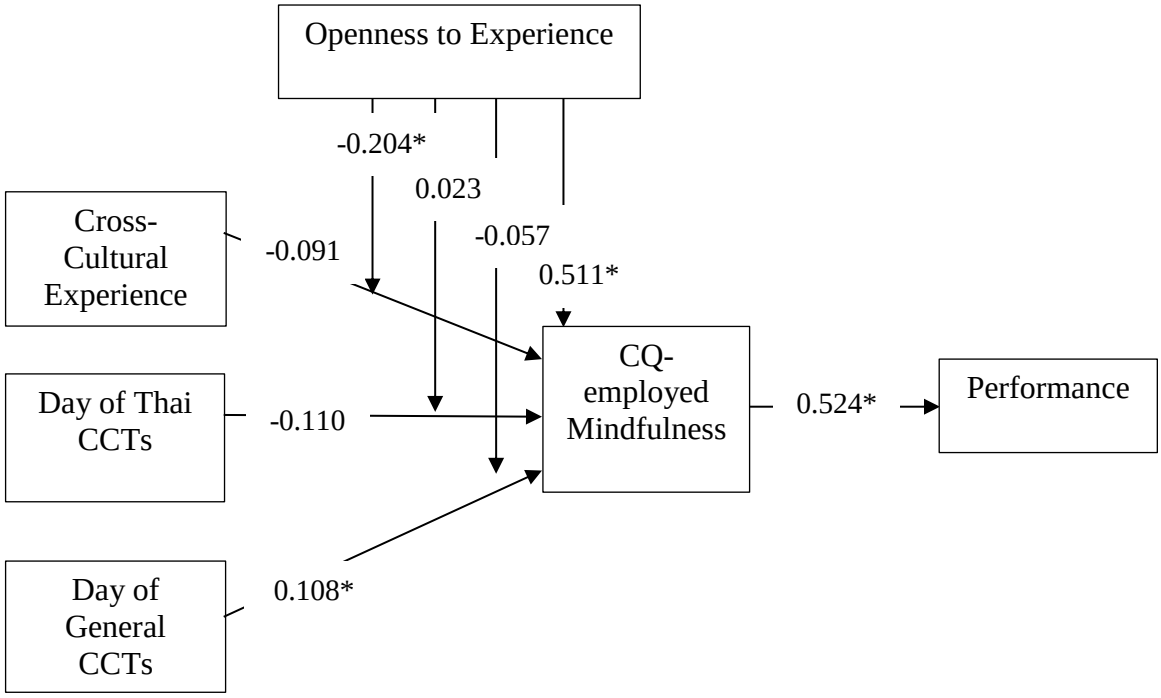

Figure 4.27. A path model on CQ-employed mindfulness as a mediator variable predicting the variable of expatriate performance using the number of days for CCTs (*$p < .05$)

Table 4.8.
Direct, Indirect, and Total Effects of Path Coefficients in the Model, using CQ-Employed Mindfulness as a Mediator Variable to Predict Expatriate Performance, in which CCTs are measured as the Total Number of Days

Parameter estimates	Direct effects			Standardized indirect effects	Standardized total effects
	Unstandardized	SE	Standardized		
Path coefficients					
CCE ⟶ CQM	-0.001	0.001	-0.091	-	-0.091
DThCCT⟶CQM	-0.032	0.019	-0.110	-	-0.110
DGCCT ⟶ CQM	0.024*	0.012	0.108	-	0.108
OE ⟶ CQM	0.294*	0.039	0.511	-	0.511
CCE*OE ⟶ CQM	-0.002*	0.001	-0.204	-	-0.204
DThCCT*OE ⟶ CQM	0.006	0.019	0.023	-	0.023
DGCCT*OE ⟶ CQM	-0.010	0.011	-0.057	-	-0.057
CCE ⟶ PM	-0.000	0.001	-0.019	-0.000	-0.019
DThCCT⟶PM	0.010	0.015	0.044	-0.013	0.031
DGCCT ⟶ PM	-0.004	0.009	-0.025	0.009	-0.016
CQM⟶ PM	0.391*	0.047	0.524	-	0.524

Note. CCE = Cross cultural experience; DThCCT = the total number of days for Thai cross-cultural trainings; DGCCT = the total number of days for general cross-cultural trainings; OE = Openness to experience; CQM = Cultural intelligence-employed mindfulness; PM = Expatriate performance *$p < .05$

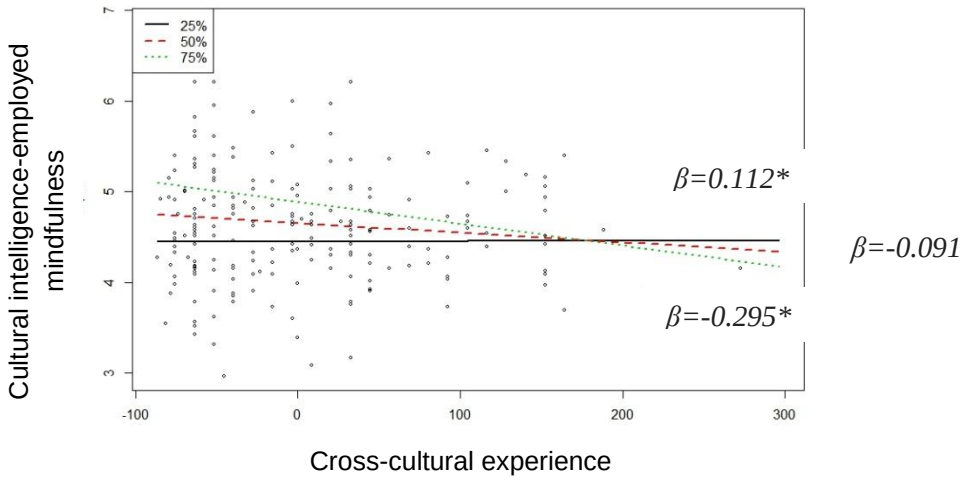

Figure 4.28. Interaction effect of cross-cultural experience and openness to experience on CQ-employed mindfulness (using the number of days for CCTs) (*$p < .05$)

Using the most recent of CCTs. A path analysis was conducted to examine the values of the model fit and the effects of path coefficients in the model predicting expatriate performance. The path model (Figure 4.29) showed the fit indexes of the observed data χ^2 (4, N = 219) = 19.092, p < .05, CFI = .966, RMSEA = .131 with 90% CI [.076, .193], SRMR = .028. Although some fit indexes did not meet the criteria, adding path regression lines to support the model fit was outside of the scope of this study. Parameter estimates (unstandardized and standardized) of direct effects, as well as standardized estimates of indirect and total effects, are presented in Table 4.9.

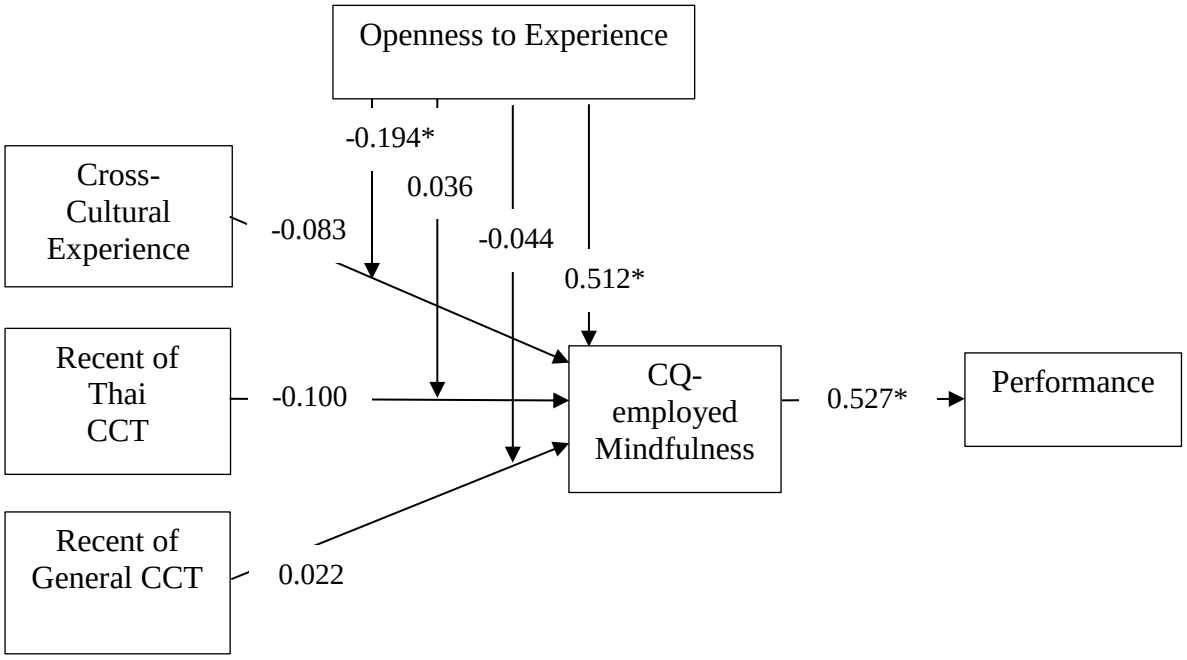

Figure 4.29. A path model on CQ-employed mindfulness as a mediator variable predicting the variable of expatriate performance using the most recent of CCTs

Three paths were found statistically significant at p < .05. In particular, openness to experience directly predicted CQ. And, the interaction between the CCE and openness to experience directly predicted CQ. Another path suggests that CQ directly predicted

performance. More than one fourth (27.5 %) of variance of performance was explained by variables in the model. Lastly, among participants with low openness to experience (participants at the 25th percentile – mean score of 6.28 – or lower on the openness scale), the relationship between CCE and CQ was found to be positive and significant; whereas, among participants with high openness to experience (participants at the 75th percentile – mean score of 7.80 – or higher on the openness scale), the relationship between CCE and CQ was found to be negative and significant. Figure 4.30 shows the interaction between the CCE and openness to experience on CQ.

Table 4.9.
Direct, Indirect, and Total Effects of Path Coefficients in the Model, using CQ-Employed Mindfulness as a Mediator Variable to Predict Expatriate Performance, in which CCTs are measured as the Most Recent of Training

Parameter estimates	Direct effects			Standardized indirect effects	Standardized total effects
	Unstandardized	SE	Standardized		
Path coefficients					
CCE ⟶ CQM	-0.001	0.001	-0.083	-	-0.083
RThCCT ⟶ CQM	-0.056	0.039	-0.100	-	-0.100
RGCCT ⟶ CQM	0.014	0.043	0.022	-	0.022
OE ⟶ CQM	0.295*	0.039	0.512	-	0.512
CCE*OE ⟶ CQM	-0.002*	0.001	-0.194	-	-0.194
RThCCT*OE ⟶ CQM	0.017	0.039	0.036	-	0.036
RGCCT*OE ⟶ CQM	-0.025	0.039	-0.044	-	-0.044
CCE ⟶ PM	-0.000	0.001	-0.034	-0.000	-0.034
RThCCT ⟶ PM	0.027	0.029	0.064	-0.022	0.042
RGCCT ⟶ PM	0.003	0.031	0.006	0.006	0.012
CQM ⟶ PM	0.393*	0.049	0.527	-	0.527

Note. CCE = Cross cultural experience; RThCCT = the most recent Thai cross-cultural trainings; RGCCT = the most recent general cross-cultural trainings; OE = Openness to experience;
CQM = Cultural intelligence-employed mindfulness; PM = Expatriate performance *$p < .05$

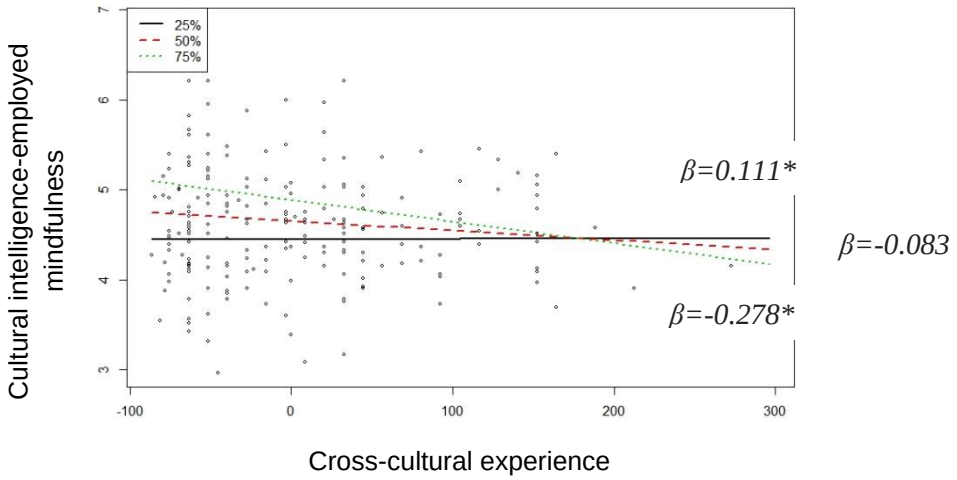

Figure 4.30. Interaction effect of cross-cultural experience and openness to experience on CQ-employed mindfulness (using the most recent of CCTs) (*$p < .05$)

Differences between the Models using CQ-only and CQ-Employed Mindfulness

In the proposed models that use CQ-only as a mediator variable, the score of CQ included the scores from cognitive CQ, metacognitive CQ, motivational CQ, and behavioral CQ. In the proposed models that use CQ-employed mindfulness as a mediator variable, the score of CQ included the scores of the original CQ sub dimensions – cognitive, metacognitive, motivational, and behavioral – and the score of mindfulness. That means both the models that use CQ-only and CQ-employed mindfulness as a mediator variable have the same number of independent variables and the same path model structure. Hence, both models have the same number of parameters and degrees of freedom that were estimated. In this case, chi-square difference test between two models does not apply. Kline (2011) described that the chi-square difference test is used to examine the statistical significance between the chi-square values of two hierarchical models (one model is a proper subset of the other) estimated with the same data. Instead,

I compared the fit indexes, the Akaike Information Criterion (AIC), and R^2 between the proposed models that use CQ-only as a mediator variable and the proposed models that use CQ-employed mindfulness as a mediator variable.

Accordingly, the fit indexes – CFI, RMSEA, and SRMR – were compared, and the AIC and R^2 statistics are also reported. The AIC is generally used to compare nonhierarchical models estimated with the same data (Kline, 2011). "The Akaike Information Criterion is based on an information theory approach to data analysis that combines estimation and model selection under a single conceptual framework" (Kline, 2011, p. 220). The lower AIC value is desired. In addition, R^2 is used to "estimate the proportions of explained variance for endogenous variables in nonrecursive models" (Kline, 2011, p. 188). The higher the proportion of explained variance of endogenous variables, the better the model fit.

In general, the overall fit of the models that use CQ-employed mindfulness is better than that of the models that use CQ-only as a mediator variable. And, the models that use CQ-employed mindfulness have the lower AIC values. In the models using the number of times for CCTs, for the model that use CQ-only, AIC = 9,894.647, but for the model that use CQ-employed mindfulness, AIC = 9,766.840. Mindfulness helped to explain an additional 3.5% of the variance of expatriate performance above and beyond the original four components of CQ. In the models using the number of days for CCTs, for the model that use CQ-only, AIC = 10,689.41, but for the model that use CQ-employed mindfulness, AIC = 10,563.05. Mindfulness helped to explain an additional 3.5% of the variance of expatriate performance above and beyond the original four

components of CQ. Lastly, in the model using the most recent of CCTs, for the model that use CQ-only, AIC = 9,166.45. However, for the model that use CQ-employed mindfulness, AIC = 9,038.53. Mindfulness helped to explain an additional 3.7% of the variance of expatriate performance above and beyond the original four components of CQ. Accordingly, the models using CQ-employed mindfulness were better fit. Mindfulness should be included in the path models. Values of fit statistics for the two path models, one with CQ-only and the other with CQ-employed mindfulness, for each type of CCT measure are presented in Table 4.10 to 4.12.

In addition, in the models using the numbers of times for CCTs, the same numbers of significant paths were found between the model that uses CQ-only and the model that uses CQ-employed mindfulness. Similarly, in the models using the recent of CCTs, the same numbers of significant paths were also found between the model that uses CQ-only and the model that uses CQ-employed mindfulness. However, in the models using the number of days for CCTs, an indirect path was not found in the model that uses CQ-employed mindfulness, but this indirect path was found in the model that uses CQ-only. That is the number of days for general CCTs indirectly predicted expatriate performance through CQ, but not through CQ-employed mindfulness.

Table 4.10.
Values of Fit Statistics for Two Path Models (Using the total number of times for CCTs)

Index	Model	
	CQ-only	CQ-employed mindfulness
χ^2	26.10	19.53
df	4	4
p	0.000	0.001
CFI	0.940	0.961
RMSEA (90% CI)	0.159 (0.104, 0.219)	0.133 (0.078, 0.195)
SRMR	0.034	0.028
AIC	9894.647	9766.840
R^2	0.236	0.271

Table 4.11.
Values of Fit Statistics for Two Path Models (Using the total number of days for CCTs)

Index	Model	
	CQ-only	CQ-employed mindfulness
χ^2	25.438	18.523
df	4	4
p	0.000	0.001
CFI	0.944	0.965
RMSEA (90% CI)	0.156 (0.102, 0.217)	0.129 (0.073, 0.191)
SRMR	0.035	0.028
AIC	10689.406	10563.050
R^2	0.237	0.272

Table 4.12.
Values of Fit Statistics for Two Path Models (Using the most recent of CCTs)

Index	Model	
	CQ-only	CQ-employed mindfulness
χ^2	25.903	19.092
df	4	4
p	0.000	0.001
CFI	0.948	0.966
RMSEA (90% CI)	0.158 (0.104, 0.219)	0.131 (0.076, 0.193)
SRMR	0.035	0.028
AIC	9166.454	9038.528
R^2	0.238	0.275

Additional Analyses

Additional analyses were conducted with the six models: (a) CQ-only path model using the numbers of CCTs, (b) CQ-employed mindfulness path model using the numbers of CCTs, (c) CQ-only path model using the number of days for CCTs, (d) CQ-employed mindfulness path model using the number of days for CCTs, (e) CQ-only path model using the most recent of CCTs, and (f) CQ-employed mindfulness path model using the most recent of CCTs by eliminating the non-significant interactions (i.e., Thai CCTs and openness to experience, as well as general CCTs and openness to experience). The fit indexes – CFI, RMSEA, and SRMR – were compared, and the AIC is also reported. Generally without trimming the two parameters, the fit indexes in these additional analyses of the six models were poorer than those of the original models. The fit indexes showed that CFI was lower, and that RMSEA and SRMR were higher than in the original models. In addition, AIC values were lower, and the R-squared values were the same. Values of fit statistics are presented in Table 4.13 to 4.15. Lastly, all but one of the paths that were statistically significant in the original models was not statistically significant in the reduced models. The one path that was not statistically significant was the indirect effect of general CCT in predicting expatriate performance through the proposed model that uses CQ-only as a mediator and that uses the total number of days.

Table 4.13.
Values of Fit Statistics for Two Path Models (Eliminating non-significant interactions & using the total number of times for CCTs)

Index	Model	
	CQ-only	CQ-employed mindfulness
χ^2	25.095	18.342
df	2	2
p	0.000	0.000
CFI	0.905	0.940
RMSEA (90% CI)	0.230 (0.155, 0.314)	0.193 (0.119, 0.278)
SRMR	0.042	0.034
AIC	8193.788	8066.270
R^2	0.236	0.271

Table 4.14.
Values of Fit Statistics for Two Path Models (Eliminating non-significant interactions & using the total number of days for CCTs)

Index	Model	
	CQ-only	CQ-employed mindfulness
χ^2	25.134	18.206
df	2	2
p	0.000	0.000
CFI	0.909	0.942
RMSEA (90% CI)	0.230 (0.155, 0.314)	0.192 (0.118, 0.278)
SRMR	0.043	0.034
AIC	8558.434	8432.421
R^2	0.237	0.272

Table 4.15.
Values of Fit Statistics for Two Path Models (Eliminating non-significant interactions & using the most recent of CCTs)

Index	Model	
	CQ-only	CQ-employed mindfulness
χ^2	25.425	18.373
df	2	2
p	0.000	0.000
CFI	0.908	0.942
RMSEA (90% CI)	0.231 (0.156, 0.315)	0.193 (0.119, 0.279)
SRMR	0.043	0.034
AIC	7793.438	7665.870
R^2	0.238	0.275

Qualitative Data Analysis

Based on the data analysis, four major themes describing learning of Thai culture from actual experiences by overseas teachers in Thailand emerged: (a) overseas teachers were seeking various effective interactions within the host country; (b) overseas teachers were searching for other sources in order to learn more about Thai culture; (c) learning and understanding Thai culture supported the teachers in their overseas assignments; and (d) barriers to learning Thai culture were also reported.

First, one of the most consistent themes emerging from the qualitative data was that overseas teachers were seeking different and effective interactions with Thais. Interaction with Thai friends was considered the most popular method for learning Thai culture. One fourth of the 65 participants reported that they learned more about Thai culture by interacting with Thai friends. Further, having a Thai spouse or partner and spending time with Thai families helped overseas teachers to understand Thai culture better. In addition, interacting and exchanging cultural knowledge with Thai and non-Thai colleagues, students, and local communities (e.g., taxi drivers, people in markets and street) were reported as a method to gain knowledge of Thai culture.

Another theme emerging from the qualitative data was that overseas teachers were searching for other sources to develop their understanding of Thai culture. Overseas teachers remarked that reading books and internet blogs about Thai culture, watching documentaries about Thai culture, attending different Thai festivals and holidays, and visiting Thai museums were all methods for learning more about Thai culture. However,

many of the participants said that observing Thai people was the most useful method for learning about Thai culture.

Third, overseas teachers described how learning and understanding Thai culture were important for expatriates in Thailand. Overseas teachers described the importance of learning Thai culture and how it provided them more understanding about what is appropriate and not appropriate to do in the culture. One participant mentioned that "Learning 'Thai culture' gives me ideas about how to deal and interact with Thais/others." In addition, another participant commented that "Learning Thai culture is very good because it will provide you [expatriates] with opportunities to better understand the aspects of society, Thai language and culture, Thai art and music, Thai education, law, and more." Moreover, one participant emphasized that "Expats gain a great deal from attending Thai culture course." Lastly, one of the participants who had not participated in any Thai-culture-specific trainings mentioned that "No, I just improved my knowledge about Thai culture through communication with locals." The participant mentioned that Thai organizations and institutions should offer some mandatory Thai cultural training to their staff members.

Fourth, overseas teachers reported some barriers to learning about Thai culture. For example, some reactions from Thais when Western people tried to pronounce or learn the Thai language were being slightly annoyed or not helpful. A participant described how "It would be easier to interact with Thai culture better if Thais were more willing to help teach the language instead of making fun of our mispronunciation. I have found that the vast majority of Thais laugh when Western people attempt to learn the language. I

also find that Western people rarely correct or laugh at Thais when they are unable to pronounce English correctly." In addition, though previous findings in this study showed that having a Thai spouse or partner supported overseas teachers in understanding Thai culture, one participant provided a contrary opinion that "dating with a person who grew up in Thailand is completely different cultural experience than participating in cultural workshop or communicating with Thai people in daily life." Lastly, a participant described the difficulty of learning Thai culture by stating that "Real Thai culture is not what is taught in schools nor is it what is shown on TV or in museums."

In conclusion, four major themes describing the learning of Thai culture from the actual experiences of overseas teachers in Thailand emerged. Interacting with Thais was consistently mentioned by participants. Searching for other sources to develop expatriates' understandings of Thai culture was discussed. Overseas teachers also described the importance of learning Thai culture. Lastly, some barriers to learning Thai culture were reported.

Summary

In this chapter, the results of the statistical analyses employed in this study were presented. First, correlations between variables used in this study were reported. Second, path analysis assumptions of sample size, absence of missing data, linearity, absence of outliers, absence of multicollinearity, homoscedasticity, and normality of residual were examined. Third, path analyses were conducted to test three different proposed models that use CQ-only as a mediator variable: (a) using the total numbers of times for CCTs, (b) using the total number of days for CCTs, and (c) using the most recent of CCTs.

Then, path analyses were performed to test three different proposed models that use CQ-employed mindfulness as a mediator variable. The results of the fit indexes and the effects were reported. The differences between the models that use CQ-only and the models that use CQ-employed mindfulness were discussed. Additional analyses were also conducted with the original six models by eliminating the non-significant interactions. Lastly, four major themes describing learning of the Thai culture were also reported in the qualitative data analysis section.

In general, the results showed that openness to experience directly predicted CQ, as well as CQ-employed mindfulness; the interaction between the CCE and openness to experience directly predicted CQ, as well as CQ-employed mindfulness; and CQ, as well as CQ-employed mindfulness, directly predicted expatriate performance. In addition, the number of days for general CCTs directly predicted CQ, as well as CQ-employed mindfulness. Lastly, the number of days for general CCTs indirectly predicted expatriate performance through CQ but not through CQ-employed mindfulness. In other words, more general CCT days indirectly predicted expatriate performance through CQ as a mediator. Further discussion of the results and implications will be presented in the next chapter.

CHAPTER 5

DISCUSSION, IMPLICATIONS, AND CONCLUSION

In this chapter, the findings of the study in relation to the literature relevant to the constructs of CQ are discussed. Implications for HRD research and practice, as well as the limitations of the study, are also provided.

Summary of the Study

Cultural intelligence is defined as "a person's capability to adapt effectively to new cultural contexts" (Earley & Ang, 2003; p. 59). Thomas (2006) described CQ as "the capability to deal effectively with people from different cultural backgrounds" (p. 78). Cultural intelligence is one of the most successful development factors that can be employed for expatriate adjustment and performance. Research has usually focused on how CQ, as a mediator, relates to individual and organizational factors (e.g., individual traits, individual cross-cultural experiences, pre-departure trainings) and overseas assignment outcomes (e.g., cultural adjustment and adaptation and performance) (Budworth & DeGama, 2012; Engle & Crowne, 2014; MacNab et al., 2012; Moon et al., 2012).

This study examines the relationships among cross-cultural experience (CCE), general cross-cultural training (CCT), Thai CCT, openness to experience, expatriate performance, and cultural intelligence (CQ), within a sample of overseas teachers employed by international educational institutions in Thailand. In Asia, the international education industry is growing dramatically (Bates, 2010), including in Thailand, where

three to five new international educational institutions are established every year (Prachachat, 2013).

Accordingly, there is a need for research studies that can inform international educational institutions how to prepare overseas teachers to interact effectively with their new students, colleagues, and stakeholders, and to develop successful intercultural assignments. The purpose of this study was to examine the sequences of relationships among the variables in the present study. The proposed sequences of relationships among the variables in the present study are as follows: CQ was considered a mediating variable between CCE and expatriate performance, as well as between CCTs and expatriate performance; and, a personality trait – openness to experience – was considered a moderating variable between CCE and CQ, as well as between CCTs and CQ. A Path analysis was conducted primarily to examine the sequences of relationships among the variables in the present study. The following hypotheses were tested to examine the hypothesized model of CQ.

Hypothesis 1: Mindfulness will account for additional variance in expatriate performance above and beyond the original four sub-components of CQ.

Hypothesis 2: Cross-cultural experience (CCE)

Hypothesis 2a: CCE will be positively related to CQ.

Hypothesis 2b: CQ will mediate the relationship between CCE and expatriate performance.

Hypothesis 3: Cross-cultural training (CCT)

Hypothesis 3ai: Thai CCT will be related to CQ.

Hypothesis 3bi: CQ will mediate the relationship between Thai CCT and expatriate performance.

Hypothesis 3aii: General CCT will be related to CQ.

Hypothesis 3bii: CQ will mediate the relationship between general CCT and expatriate performance.

Hypothesis 4: Openness to experience

Hypothesis 4a: Openness to experience will be positively related to CQ.

Hypothesis 4b: Openness to experience will moderate the relationship between CCE and CQ.

Hypothesis 4ci: Openness to experience will moderate the relationship between Thai CCT and CQ.

Hypothesis 4cii: Openness to experience will moderate the relationship between general CCT and CQ.

Hypothesis 5: CQ will be positively related to expatriate performance.

Discussion of Results

Findings from this study suggest that the variables used in this study are related to and contribute significantly to explaining expatriate performance within the context of the international educational institutions in Thailand. In particular, the results showed that some fit indexes on the hypothesized models that use CQ-only were met. The overall fit of the hypothesized models that use CQ-employed mindfulness are better than the overall fit of CQ-only models. Mindfulness helped explain an additional 3.5 to 3.7% of the variance of performance above and beyond the original four components of CQ;

however, in this case, chi-square significant difference test between two models did not apply. The same patterns of findings were found between the models that use CQ-only and the models that use CQ-employed mindfulness on the hypotheses using the number of times for CCTs and using the most recent of CCTs, but not in the models using the number of days for CCTs. First, overseas teachers with high openness to experience scores reported high CQ scores. However, overseas teachers with high openness to experience and with high CCE had lower CQ scores than the overseas teachers with high openness to experience and with low CCE. Overseas teachers with high openness to experience and with high CCE also had lower CQ scores than the overseas teachers with low openness to experience and with high CCE. Further, the overseas teachers with high CQ scores reported high expatriate performance scores. Lastly, more general CCT days directly predicted higher CQ in both the model that uses CQ-only and the model that uses CQ-employed mindfulness. However, the significant indirect effect of general CCT to predict expatriate performance through CQ was found only on the model that uses CQ-only, but not on the model that uses CQ-employed mindfulness. With the guidance of existing theory and research, the following section discusses the findings of each of the hypotheses tested.

Cultural Intelligence-Employed Mindfulness

Hypothesis 1 stated that mindfulness would account for additional variance in expatriate performance above and beyond the original four sub-components of CQ. Results from the correlation matrix showed that the construct of CQ was positively and significantly related to expatriate performance and openness to experience, and that CQ

was negatively and significantly related to the total number of times for Thai CCT and the most recent of Thai CCT. In addition, CQ was found to be significantly and negatively related to CCE and the total number of days for Thai CCT, but only when mindfulness was added as another sub-component of CQ. This means that the construct of CQ-employed mindfulness was significantly correlated with more of the variables used in the study than was CQ alone.

Furthermore, results from the hypothesized path models showed that, when mindfulness was added as another sub-component of CQ, it helped to explain an additional 3.5 to 3.7% of the variance of expatriate performance, above and beyond the original four components of CQ. And, the overall fit of the models that use CQ-employed mindfulness is better than that of the models that use CQ-only as a mediator variable. Accordingly, mindfulness should be included in the path models.

These findings are consistent with Thomas's concept of CQ, in which mindfulness or the ability to be actively attentive and to reflect cues leads individuals to connect between cognitive knowledge and action in different ways. Thomas's concept of CQ was developed based on a system of interacting abilities in intelligence theory (Sternberg, 1997; Sternberg & Detterman, 1986). The three components – cognitive knowledge, mindfulness, and behavior – are designed to be interconnected. This interconnection helps individuals to develop responses that are more consistent with aims or motives to deal effectively with people in cross-cultural settings.

This study's findings contribute to the CQ literature and support the existing notion that the ability to deliberately be aware and reflect on cues on a here-and-now

basis could be considered a CQ component. Mindfulness could be considered a CQ component that reflects and harmonizes individuals' cognitive knowledge and action under individuals' motives to deal effectively in different cross-cultural settings.

Cross-Cultural Experience and Cultural Intelligence

Hypotheses 2a and 2b stated that CCE would be positively related to CQ, and that CCE would indirectly predict expatriate performance through a CQ mediator. Results from the correlation matrix showed that there were no significant correlations between CCE and CQ, or between CCE and expatriate performance. However, there was a negative and significant correlation between CCE and CQ-employed mindfulness. In addition, results from the hypothesized path models indicated that CCE had no statistical significant effect on CQ, implying that there was no support for the two hypotheses.

These findings are inconsistent with the existing cross-cultural literature that describes the effect of CCE on improving individuals' understanding of a new culture and on completing their overseas assignments (Takeuchi et al., 2005). Results from many cross-cultural research studies have emphasized the influence of CCE on various international outcomes. For example, Crowne (2008) investigated the relationships between CCE and different CQ components by collecting data with a sample from multiple organizations and students in business classes in the northeastern United States. The results showed that participants with both employment and education abroad were found to have higher levels of overall CQ and meta-cognitive CQ. Current employment was also related to high levels of overall CQ.

However, past research by Imai and Gelfand (2010) found that CCE was important to only specific types of CQ. And, international experience did not show strong correlation with overall CQ and its subcomponents. Lastly, the longer an individual's CCE was, the lower the individual's cooperative motives. Similarly, Engle and Crowne (2014) conducted a study on the impact of short-term CCE. The results showed that there were no significant associations between CCE and the different components of CQ, during both pre-departure and returning periods, though there was a significant increase in each of the four components of CQ measured during the pre-departure and returning periods.

One possible explanation for the non-significant relationship between CCE and CQ is that there is an actual relationship between CCE and CQ, but that it occurs in a more complicated way. Cross-cultural experience by itself may not be significantly associated with CQ; however, the effect of CCE may stand out when interpreted with another variable. In this study, I also examined the effects of the interactions between different independent variables, including CCE with and openness to experience, on CQ. The results showed that the effect of CCE on CQ is significantly moderated by openness to experience. This means that the importance of high and low openness to experience must be considered when interpreting the effect of CCE on CQ.

Further, the effect of CCE may stand out when interpreted with how high or low CCE is. Lee and Sukoco (2010) conducted a research study with expatriates in Taiwan and found that the expatriates with high CQ together with high CCE had higher levels of cultural adjustment and cultural effectiveness than the expatriates who had either low CQ

scores or low CCE. Commonly, the high and low levels of a moderator variable are represented by +1 and -1 standard deviations, respectively. Similarly, Jyoti and Kour (2017) conducted a cross-cultural study in India and found that individuals with high CQ together with high CCE had higher levels of cross-cultural adaptability compared with individuals who had lower CCE. This interaction effect will be discussed in the openness to experience and cultural intelligence section.

Cross-Cultural Training and Cultural Intelligence

The concept of cross-cultural training has been claimed to be an effective cross-cultural interaction tool (Black & Mendenhall, 1990; Deshpande & Viswesvaran, 1992; Earley, 1987; Landis & Brislin, 1983; Littrell & Salas, 2005; Morris & Robie, 2001; O'Brien et al., 1971; Wang & Tran, 2012). Various classifications in the different CCT techniques have been developed. In this study, I measured the CCT techniques proposed by Gudykunst et al. (1996) -- culture-general and culture-specific trainings.

In hypotheses 3ai and 3aii of this study, it was proposed that Thai CCT would be related to CQ, and that general CCT would be related to CQ. And, hypotheses 3bi and 3bii stated that CQ would mediate the relationship between Thai CCT and expatriate performance, as well as between general CCT and expatriate performance. None of the three models included more than one of the three dimensions of CCTs – number of times, number of days, and the most recent CCT. It could be that all CCTs contribute to explaining CQ, and it could be that three variables may interact among others in explaining CQ and performance. One of the research assumptions was that having a higher total number of times or days for CCT would explain higher levels of expatriate

performance through the effect of CQ. However, having a longer period since the last CCT was taken would explain lower levels of expatriate performance through the effect of CQ.

Results from the correlation matrix showed that there were negative and significant correlations between the total number of times for Thai CCT and CQ, as well as between the recentness of Thai CCT and CQ. In addition, there were negative and significant correlations between the total number of times for Thai CCT and CQ-employed mindfulness, between the total number of days for Thai CCT and CQ-employed mindfulness, and between the recentness of Thai CCT and CQ-employed mindfulness. This means that the participants who had more times or days of Thai CCT had CQ scores that were more likely to be lower, and vice versa. And the participants who had recently had Thai CCT had CQ scores that were likely to be higher, and vice versa.

Furthermore, results from the hypothesized path models indicated that only the number of days of general CCT had a statistically significant effect on CQ, as well as on CQ-employed mindfulness. This effect was not found on the number of times of both Thai and general CCTs, on recent Thai and general CCTs, or on the number of days of Thai CCT. In addition, the findings also indicated that there was an indirect statistically significant effect on the scores of expatriate performance from the numbers of days of general CCT through CQ, but not through CQ-employed mindfulness.

These findings are partially consistent with the existing cross-cultural literature and research on CCTs. One of the original purposes of this research study was to observe

the effect of both Thai and general CCTs. However, only the effect of the number of days of general CCT was found to be statistically significant. One possible explanation for this finding is that CQ was designed for non-culture-specific skills or for describing individuals' capacity to adapt effectively in different cultural settings, not for one specific culture (Budworth & DeGama, 2012; Livermore, 2011; Ng & Earley, 2006; Thomas, 2006). This means the capabilities expressed as CQ are supposed to be variable across different cultural settings. Culture-general method refers to programs that aim to provide broad cross-cultural knowledge and skills (Berry et al., 2011; Gertsen, 1990). Hence, a culture-general training design could be a better CCT technique to support individuals' CQ than a culture-specific training design. This finding contributes to the CQ and CCT literature in that different techniques of CCTs could impact differently on individuals' capability in cross-cultural settings, meaning that it could also indirectly impact individuals' quality of work and non-work performance.

In addition, using only a CCT technique may not be adequate for individuals to learn and develop the quality of their work and life abroad. I would recommend that cross-cultural professionals apply both culture-general and culture-specific training techniques when designing CCT programs. Though Thai CCTs did not have a direct effect on CQ or indirect effect on expatriate performance, the correlation matrix offers some insights into how culture-specific trainings could be organized effectively with not too many times and days, but through an efficient period for retraining. Further, findings from the qualitative data analysis emphasized the value of Thai culture-specific trainings,

which provide opportunities for expatriates to better understand the different aspects of Thai culture, including good manners, society, language, education, and law.

Openness to Experience and Cultural Intelligence

Hypothesis 4a stated that openness to experience would be positively related to CQ. And hypotheses 4b, 4ci, and 4cii stated that openness to experience would moderate the relationships between CCE and CQ, Thai CCT and CQ, and general CCT and CQ. Results from the correlation matrix showed that openness to experience was positively and significantly related to CQ, CQ-employed mindfulness, and expatriate performance. And openness to experience was negatively and significantly related to the total number of times for Thai CCT.

Furthermore, consistent with expectations, results from the hypothesized path models showed that openness to experience has a statistically significant effect on CQ. Openness to experience was considered an important personality characteristic for individuals to develop their CQ and to work effectively in cross-cultural settings. Existing CQ literature has described how different personality traits could predict different CQ subcomponents. For example, McCrae and Costa (2008) conducted a research study in Singapore and found that openness to experience was related to all four CQ subcomponents.

There was also an interaction effect between CCE and openness to experience on CQ. However, there were no significant interactions between CCTs and openness to experience. These findings are quite robust in that they were found in every model tested in this study. This interaction effect revealed that the importance of high and low

openness to experience must be considered when interpreting the effect of CCE on CQ. In this study, participants could be divided into two groups - low openness to experience and high openness to experience. Participants with low openness to experience and with high CCE tended to have higher CQ scores than participants with low openness to experience and with low CCE. In contrast, participants with high openness to experience and with low CCE tended to have higher CQ scores than participants with high openness to experience and with high CCE. And, participants with high openness to experience and with low CCE tended to have higher CQ scores than participants with low openness to experience and with the low level of CCE. Lastly, participants with low openness to experience and with high CCE tended to have higher CQ scores than participants with high openness to experience with high CCE. In other words, participants with high openness to experience and with low CCE tended to have the highest CQ scores compared with other participants; however, participants with high openness to experience and with high CCE tended to have the lowest CQ scores compared with other participants. The effect of CCE on CQ is significantly moderated by the level of openness to experience. This means that being imaginative and preferring variety could moderate the relationship between CCE and CQ.

This study's findings contribute to the CQ research and literature in that different levels of openness to experience, when studied with another independent variable (CCE) could influence different levels of CQ. The effect of CQ could be interpreted in a more complex manner if cross-cultural researchers understood the relationship of how the two cross-cultural independent variables (CCE and openness to experience) interact with each

other. Hence, it is important for cross-cultural researchers to observe and examine cross-cultural variables through different approaches, which would support the researchers in understanding better the nature of each variable.

Cultural Intelligence and Expatriate Performance

Cultural intelligence has been found to be related to different overseas assignment outcomes (e.g., cultural adjustment and adaptation, performance) (Budworth & DeGama, 2012; Engle & Crowne, 2014; MacNab et al., 2012; Moon et al., 2012). Performance is a criterion that has received less attention because it usually has been combined with overall expatriates' success (Thomas & Lazarova, 2006). In this study, the combination of expatriate task performance and contextual performance was measured. Within CQ research, a positive relationship between CQ and expatriate performance has been found (Chen et al., 2010; Rose et al., 2010). However, Lee and Sukoco (2010) conducted a study with expatriates in Taiwan and found that there was no direct relationship between CQ and expatriates' performance. CQ needed to be mediated by cultural adjustment and cultural effectiveness before affecting expatriate performance.

This study's fifth hypothesis stated that CQ would be positively related to expatriate performance. Consistent with expectations, results from the correlation matrix showed that there was a positive and significant correlation between CQ and expatriate performance. In addition, CQ was found to be a significant predictor of expatriate performance. This finding is quite robust in that it was found in every model tested in this study. The fact that CQ is highly associated with expatriate performance is consistent with existing CQ literature (Earley & Ang, 2003). Furthermore, the relationship between

CQ and expatriate performance has been reported in previous empirical studies (Chen et al., 2010; Rose et al., 2010). Overall, it appears that CQ is highly linked to expatriate performance.

This finding illustrates that within the context of the international educational institutions in Thailand, overseas teachers with high CQ scores reported high levels of expatriate performance. Findings from this study contribute to the body of research on CQ in a non-Western context and emphasize the direct effect of CQ on expatriate performance.

Implications for Research

This study presents a number of implications for future research. First, different research methodologies are recommended for conducting cross-cultural studies. Cross-cultural researchers could consider applying longitudinal designs to examine if expatriates change their cross-cultural thinking and behaviors across time. Specifically, although this study did not find a direct impact of CCE on CQ, there was an interaction between CCE and openness to experience in predicting CQ. A longitudinal study could help cross-cultural researchers to understand how the length of cross-cultural experience interacts with expatriates' personality. In other words, cross-cultural researchers may observe and examine different levels of cross-cultural variables across time, which would support the researchers in understanding better the nature of each variable. In addition, qualitative research using interview and focus group methods is recommended. Interview and focus group methods could provide more detailed description of the participants'

own experience of the training of the construct of CQ and how it relates to expatriate performance and other related variables.

Second, more research could be conducted to test different personality traits. In this study, one of the Big Five personality traits - openness to experience - was examined, and the significance of openness to experience in predicting CQ was found in every model tested. Accordingly, it would be beneficial to examine other personality traits to see if there is a relationship with CQ, and if the traits lead to an association between different independent variables and CQ, similar to the construct of openness to experience.

In addition, future research studies could investigate the effects of different CCT techniques and methods. The results of this study showed that different CCT techniques could impact CQ and overseas assignments differently. In this case, general CCT had a direct impact on CQ and an indirect impact on expatriate performance. And, overseas teachers described the importance of Thai-culture-specific trainings as providing opportunities for them to better understand different aspects of Thai culture, including good manners, society, language, education, and law. However, findings from the path analysis showed that Thai specific CCT did not have a direct impact on CQ and only an indirect impact on expatriate performance. One reason for these inconsistent findings could be that Thai-culture-specific trainings might be important for overseas teachers to better understand Thai culture and help them to live comfortably in Thailand, but they may not directly impact their performance. However, general CCT had a direct impact on CQ and an indirect impact on expatriate performance. Many attempts have been made to

develop and classify various types of CCT techniques and methods. Hence, cross-cultural researchers could examine the benefits of each type and technique, and how each CCT technique contributes differently to various cross-cultural knowledge and skills.

Lastly, the population in this study was overseas teachers in Thailand, which is considered a very specific population. Future research studies could examine the relationships among the variables used in this study in different industries (e.g., healthcare, technology, telecommunication, tourism), in different cross-cultural settings (e.g., cross-cultural diversity teams, multinational companies), and in different national cultures.

Implications for Practice

This study also presents a number of implications for practice. Some insights into how HRD professionals and organizations could support expatriates in their overseas assignments are discussed. First, organizations could prepare expatriates in developing their CQ, including cognitive-metacognitive CQ, behavioral CQ, and motivational CQ. The results from this study showed that the construct of CQ significantly predicted expatriate performance. Therefore, organizations may find it beneficial to actively promote interventions, activities, and/or training programs that increase expatriates' understanding, motivation, and appropriate behaviors in cross-cultural settings. However, different interventions or training techniques aim to provide different knowledge and skills. Accordingly, it is important for HRD professionals and organizations to understand the nature of each technique and also to understand the needs of expatriates before applying the appropriate techniques to their organizational context. For instance,

general culture trainings are recommended if a training section is aimed to provide a broad cross-cultural knowledge and patterns of behaviors in general (Berry et al., 2011), thereby supporting expatriates in developing CQ and working performance. And culture-specific trainings are recommended if there is a need for expatriates to understand and be competent in one particular culture (Berry et al., 2011; Gertsen, 1990), as with overseas teachers who described the importance of Thai-culture-specific trainings in providing a better understanding of Thai culture, including good manners, society, language, education, and law.

Further, it is important for HRD professionals and organizations to design and plan their organizational training and development well. For instance, the number of times for training programs and the retraining period were found to be related to CQ. More recent CCTs help expatriates to develop important knowledge, motivation, and behaviors, including working performance in cross-cultural settings. However, too much time spent in training programs could associate with undesirable thinking and behaviors of expatriates.

In addition, the findings related to openness to experience appear to be more difficult from an organizational intervention standpoint. Personality traits have been used to describe individuals' characteristics or patterns of behavior, which are difficult to change. In this study, openness to experience was found to have a direct impact on CQ. Accordingly, HRD interventions and programs that are congruent with this distinct personality trait are recommended, for example, a cross-cultural intervention or training that shows the benefit of being openness to experience in cross-cultural settings and what

kinds of behavior or thinking characterize people with openness to experience. However, personality traits are difficult to change, so recruiting employees who have high openness to experience to work in cross-cultural settings is an option. Specifically with expatriates with low CCE, high openness to experience directly influences high CQ. This means that organizations may consider recruiting employees with low CCE but high openness to experience to work abroad because this group of expatriates has a better chance of developing high CQ, which may indirectly impact their work performance.

Lastly, HRD professionals and organizations may consider creating a reward system around CQ and openness to experience. Usually expatriates develop their own intrinsic motivation to work abroad (Ramis & Krastina, 2010); however, HRD professionals and organizations could motivate them to transfer what they learn in CCT sections to real work situations. HRD professionals could create a reward system that promote expatriates' cognitive CQ (e.g., when expatriates check the accuracy of their cultural knowledge when interacting with people from different cultures, when they better understand different cultural values), behavioral CQ (e.g., when expatriates change their verbal tones/accents when a cross-cultural interaction requires it), motivational CQ (e.g., when expatriates show their confidence in socializing with people in a cross-cultural setting) and, and openness to experience (e.g., being imaginative and creative).

Limitations

In this research study, there are several limitations that need to be considered. The first limitation of this research study was the use of a very specific population – overseas teachers in Thailand. In Thai culture, teachers are not only responsible for accomplishing

their international assignments, but also for being a paradigmatic self to their students (Chotikphnich, 2011). Accordingly, caution should be exercised when generalizing the findings to other industries (e.g., healthcare, technology, telecommunication, tourism) or overseas teachers in different cross-cultural settings. Expatriates in different industries and countries may have different responsibilities that need to be accomplished.

In addition, I do not have information about the different cross-cultural curricula or training that each school may provide to their teachers. The Thai government and Thai Educational Department enacted a regulation requiring that a registered expatriate teacher has to participate in cross-cultural training. However, some schools may not be following it. Therefore, the CCT results in this study were based on very broad interpretations from the overseas teachers who participated in the survey.

Furthermore, the constructs and measurements used in this study were developed based on Western literature. Only the construct of mindfulness was originally developed in Eastern meditation practices (Mikulas, 2007); however, the construct has been defined and adapted extensively from East to West over the past decade. Therefore, what has been measured in Western literature may not cover every aspect in the international education industry in Thailand.

Lastly, findings from this study were based on self-reported data with all of the possible biases that this approach entails. Consequently, it would be beneficial for future research to acquire CQ data from sources other than expatriates themselves (e.g., supervisors, colleagues, parents, students). In addition, Chang (2017) recently discussed an approach to studying intercultural understanding using cultural neuroscience in HRD.

Concluding Thoughts

The construct of CQ has been popular in international business and organization research and practice since the early 2000s. It has commonly been related to high levels of different overseas assignment outcomes (e.g., cultural adjustment and adaptation, performance) (Budworth & DeGama, 2012; Engle & Crowne, 2014; MacNab et al., 2012; Moon et al., 2012). Hence, a better understanding of the construct could positively influence expatriates' capability to interact and perform effectively in different cross-cultural contexts.

A fundamental advantage of this research study is the investigation of various CQ predictors and expatriate performance through CQ from a holistic perspective. Cultural intelligence was a significant predictor of expatriate performance. And, significant predictors of CQ included expatriates' cross-cultural experience, cross-cultural trainings, and openness to experience. However, high attention is needed in order to understand and interpret each of the variables correctly because many CQ predictors are usually considered multidimensional constructs (Takeuchi et al., 2005). For instance, this study found that changing techniques of cross-cultural trainings and different levels of cross-cultural experience together with shifting levels of openness to experience could affect the influence of the variables on CQ and expatriate performance. Accordingly, this present study offers some insights into how HRD professionals and organizations could support expatriates in their overseas assignments, and how HRD researchers should be more cautious when studying cross-cultural variables.

In closing, it is hoped that this present study contributes additional knowledge to the literature and research on CQ and its cross-cultural constructs within a non-Western context. It would be beneficial for future research to acquire CQ data from: sources other than expatriates themselves, different industries, different non-Western countries, and different methodologies and cross-cultural variables.

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Appendixes A:

Survey Instruments

The Cultural Intelligence Scale (CQS)

Please read each statement and select the response that best describes your capabilities.
Select the answer that BEST describes you AS YOU REALLY ARE (1 = disagree strongly; 7 = agree strongly)

	Statements	Disagree Strongly			Neither Disagree or Agree			Agree Strongly
1.	I am conscious of the cultural knowledge I use when interacting with people with different cultural backgrounds.	1	2	3	4	5	6	7
2.	I know the legal and economic systems of other cultures.	1	2	3	4	5	6	7
3.	I enjoy interacting with people from different cultures.	1	2	3	4	5	6	7
4.	I change my verbal behavior (e.g., accent, tone) when a cross-cultural interaction requires it.	1	2	3	4	5	6	7
5.	I adjust my cultural knowledge as I interact with people from a culture that is unfamiliar to me.	1	2	3	4	5	6	7
6.	I know the rules (e.g., vocabulary, grammar) of other languages.	1	2	3	4	5	6	7
7.	I am confident that I can socialize with locals in a culture that is unfamiliar to me.	1	2	3	4	5	6	7
8.	I use pause and silence differently to suit different cross-cultural situations.	1	2	3	4	5	6	7
9.	I am conscious of the cultural knowledge I apply to cross-cultural interactions.	1	2	3	4	5	6	7
10.	I know the cultural values and religious beliefs of other cultures.	1	2	3	4	5	6	7
11.	I am sure I can deal with the stresses of adjusting to a culture that is new to me.	1	2	3	4	5	6	7
12.	I vary the rate of my speaking when a cross-cultural situation requires it.	1	2	3	4	5	6	7
13.	I check the accuracy of my cultural knowledge as I interact with people from different cultures.	1	2	3	4	5	6	7
14.	I know the marriage systems of other cultures.	1	2	3	4	5	6	7
15.	I enjoy living in cultures that are unfamiliar to me.	1	2	3	4	5	6	7
16.	I change my nonverbal behavior when a cross-cultural situation requires it.	1	2	3	4	5	6	7
17.	I know the arts and crafts of other cultures.	1	2	3	4	5	6	7
18.	I am confident that I can get accustomed to the shopping conditions in a different culture.	1	2	3	4	5	6	7
19.	I alter my facial expressions when a cross-cultural interaction requires it.	1	2	3	4	5	6	7
20.	I know the rules for expressing nonverbal behaviors in other cultures.	1	2	3	4	5	6	7

Toronto Mindfulness Scale

Please read each statement. Next to each statement are five choices: “not at all,” “a little,” “moderately,” “quite a bit,” and “very much.” Please indicate the extent to which you agree with each statement.

	Statements	Not at All	A Little	Mode rately	Quite a Bit	Very Much
1.	I experienced myself as separate from my changing thoughts and feelings.	1	2	3	4	5
2.	I was more concerned with being open to my experiences than controlling or changing them.	1	2	3	4	5
3.	I was curious about what I might learn about myself by taking notice of how I react to certain thoughts, feelings or sensations.	1	2	3	4	5
4.	I experienced my thoughts more as events in my mind than as a necessarily accurate reflection of the way things ‘really’ are.	1	2	3	4	5
5.	I was curious to see what my mind was up to from moment to moment.	1	2	3	4	5
6.	I was curious about each of the thoughts and feelings that I was having.	1	2	3	4	5
7.	I was receptive to observing unpleasant thoughts and feelings without interfering with them.	1	2	3	4	5
8.	I was more invested in just watching my experiences as they arose, than in figuring out what they could mean.	1	2	3	4	5
9.	I approached each experience by trying to accept it, no matter whether it was pleasant or unpleasant.	1	2	3	4	5
10.	I remained curious about the nature of each experience as it arose.	1	2	3	4	5
11.	I was aware of my thoughts and feelings without over identifying with them.	1	2	3	4	5
12.	I was curious about my reactions to things.	1	2	3	4	5
13.	I was curious about what I might learn about myself by just taking notice of what my attention gets drawn to.	1	2	3	4	5

Openness to Experience

Please indicate the extent to which you agree with each statement. Please rate the following statements from 1 "extremely inaccurate" to 9 "extremely accurate."

	Statements	Extremely Inaccurate								Extremely Accurate
1.	I frequently feel highly creative.	1	2	3	4	5	6	7	8	9
2.	I am imaginative.	1	2	3	4	5	6	7	8	9
3.	I appreciate art.	1	2	3	4	5	6	7	8	9
4.	I find novel solutions.	1	2	3	4	5	6	7	8	9
5.	I am more original than others.	1	2	3	4	5	6	7	8	9

Expatriate Task Performance

Please recall your most recent actual performance evaluation in your current assignment and use that as a guide to rate the following items from 1 "unsatisfactory or poor" to 5 "exceptional or outstanding."

	Statements	Unsatisfactory or Poor		Moderate		Exceptional or Outstanding
1.	Overall performance	1	2	3	4	5
2.	Ability to get along with others	1	2	3	4	5
3.	Completing tasks on time	1	2	3	4	5
4.	Quality (as opposed to quantity) of performance	1	2	3	4	5
5.	Achievement of work goals	1	2	3	4	5

Expatriate Contextual Performance

Please recall your most recent actual performance evaluation in your current assignment and use that as a guide to rate the following items from 1 "unsatisfactory or poor" to 5 "exceptional or outstanding."

	Statements	Unsatisfactory or Poor		Moderate		Exceptional or Outstanding
1.	Your ability to foster organizational commitment in the foreign subsidiary.	1	2	3	4	5
2.	Your effectiveness at representing your company to host national customers and community	1	2	3	4	5
3.	Your effectiveness at maintaining good working relationships with host nationals.	1	2	3	4	5
4.	Your effectiveness at communicating and keeping others in your work unit informed.	1	2	3	4	5
5.	Your effectiveness at supervising and developing host national subordinates.	1	2	3	4	5

Demographic

Demographic items

1. Gender (check below):

☐ Male ☐ Female ☐ Other

2. Age (in years): _____

3. Nationality: _____

4. Race (check all that apply):

☐ White ☐ Black ☐ Hispanic ☐ Asian

☐ Other (please specify) _____

5. Educational level (check the highest level completed):

☐ High School degree ☐ Bachelor's degree ☐ Master's degree ☐ Doctoral degree

☐ Other (please specify) _____

6. Do you have a partner/spouse who has a different nationality from you?

☐ Yes ☐ No

7. Did you grow up in a culture outside of at least one of your parents' original cultures?

☐ Yes ☐ No

8. How many languages can you speak?

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ more than 5

9. How fluent are you in Thai?

	Not at all	Not fluent	Fair	Good	Very good	Excellent
Listening						
Speaking						
Reading						
Writing						

Working Experience

Reminder: All data will be kept anonymous!

Working experience

1. Cumulatively how long have you been working outside of your country? _____ years

2. Cumulatively how long have you been working in Thailand? _____ years

3. How long have you been working at international educational institution(s)? _____ years

4. Are you a full-time or part-time employee?

☐ Full-time ☐ Part-time (hours per week): _____

5. What is the category of your institution? (check all that apply):

☐ University ☐ College ☐ High school ☐ Elementary

☐ Kindergarten ☐ Language institute ☐ Other (please specify) _____

6. What is your institution curriculum system? (check all that apply):

☐ Thai ☐ American ☐ British

☐ IB (International Baccalaureate) ☐ Other (please specify) _____

7. What is your current position? _____

8. Where in Thailand is your institution located?

☐ Bangkok Metropolitan Region (Bangkok, Nonthaburi, Nakhonpathom, Phatumthani, Samutprakan, and Samutsakhon).

☐ Northern ☐ Northeastern ☐ Eastern

☐ Western ☐ Central ☐ Southern

9. Have you participated in Thai-culture-specific trainings/workshops?

☐ Yes ☐ No

If "yes" 9.1 Please enter the total number of Thai-culture-specific trainings or workshops you have participated in _____

If "yes" 9.2 Please add together the number of days for each Thai-culture-specific trainings or workshops you received and enter the total number of days _____ days

If "yes" 9.3 Please indicate when was your most recent Thai-culture-specific trainings/workshops?

☐ Less than a year ☐ 1-3 years ☐ Greater than 3 years ago

10. Have you participated in general culture trainings/workshops?

☐ Yes ☐ No

If "yes" 10.1 Please enter the total number of general culture specific trainings or workshops you have participated in _____

If "yes" 10.2 Please add together the number of days for each general culture specific trainings or workshops you received and enter the total number of days _____days

If "yes" 10.3 Please indicate when was your most recent general culture trainings/workshops?

☐ Less than a year ☐ 1-3 years ☐ Greater than 3 years ago

11. If you would like to share with us how you learn more about the Thai culture, please provide your information below.

Thank you so much.

Appendixes B:

Research Consent Form

Cultural Intelligence at International Educational Institutions

Witsinee Bovornusvakool
Ph.D. Candidate, Human Resource Development
Department of Organizational Leadership, Policy, & Development
University of Minnesota – Twin Cities

You are invited to be in a research study of cultural intelligence at international educational institutions. You were selected as a possible participant because you are currently working at an international institution and therefore fit with the research population of this study. We ask that you read this form and ask any questions you may have before agreeing to be in the study.

This study is being conducted by: Miss Witsinee Bovornusvakool, PhD Candidate, Department of Organizational Leadership, Policy, and Development, University of Minnesota, Minneapolis, USA

Procedures:
If you agree to be in this study, we would ask you to do the following things:
You will be asked to complete a short survey. The survey should take approximately 20 minutes to complete.

Confidentiality:
The records of this study will be kept anonymous, private, and confidential. In any sort of report we might publish, we will not include any information that will make it possible to identify a subject. Research records will be stored securely and only researchers will have access to the records.

Voluntary Nature of the Study:
Participation in this study is voluntary. Your decision whether or not to participate will not affect your current or future relations with the University of Minnesota or your institution. If you decide to participate, you are free to not answer any question or withdraw at any time without affecting those relationships.

Contacts and Questions:
The main researcher conducting this study is Witsinee Bovornusvakool. You may ask any questions you have now. If you have questions later, you are encouraged to contact them at +1 (612) 413-5810 and bovor002@umn.edu. You may also contact Miss Bovornusvakool's faculty advisor, Dr. David Christesen, at +1 (612) 625-2213 or chri1614@umn.edu.

If you have any questions or concerns regarding this study and would like to talk to someone other than the researcher(s), you are encouraged to contact the Research Subjects' Advocate Line, D528 Mayo, 420 Delaware St. Southeast, Minneapolis, Minnesota 55455; (612) 625-1650.

If you want to participate in this study, please proceed to the survey.

Appendixes C:

Invitation Letters to School Principals and Research Participants

Emails for Subject Recruitment

1. Email to international education institutions

Dear Sir or Madam:

My name is Witsinee Bovornusvakool. I am a doctoral candidate majoring in Human Resource Development at the University of Minnesota and am currently conducting my doctoral dissertation research on the topic of cultural intelligence at international education institutions.

I am writing this email to request your permission to conduct a questionnaire survey of teachers at your organization. Findings from the survey will potentially make a significant contribution to the current body of research on cultural intelligence and may be of relevance and interest to human resource scholars, practitioners, consultants, as well as organizations operating in Thailand.

In addition, the records of this study will be kept private. In any sort of report I might publish, I will not include any information that will make it possible to identify a subject or an organization. Research records will be stored securely and only the researcher will have access to the records.

I would really appreciate an opportunity to discuss the various aspects of the study with you in person anytime at your convenience. I can be contacted at bovor002@umn.edu .

Thank you very much for your time. I look forward to hearing from you.

Sincerely,

Witsinee Bovornusvakool

2. Email to participants

Dear Sir or Madam:

My name is Witsinee Bovornusvakool. I am a doctoral candidate majoring in Human Resource Development at the University of Minnesota and am currently conducting my doctoral dissertation research on the topic of cultural intelligence at international education institutions.

I would like to invite you to participate in this research study by completing an electronic survey. You were selected as a possible participant because you are a current teacher at an international education institution and therefore fit well with the research population of this study. If you agree to participate, please click on the following link: [Insert Link]. The survey should take approximately 20 minutes to complete.

Participation in this study is voluntary. Your decision whether or not to participate will not affect your current or future relations with your current institution. If you'd like to participate, you are free not to answer any question or withdraw from the study at anytime.

If you have any questions or concerns regarding participation in this study, please do not hesitate to contact me at bovor002@umn.edu.

Thank you very much for your time. I look forward to hearing from you.

Sincerely,

Witsinee Bovornusvakool

Appendixes D:

IRB Approval Letter

Witsinee Bovornusvakool <bovor002@umn.edu>

1607E91001 - PI Bovornusvakool - IRB - Exempt Study Notification

1 message

irb@umn.edu <irb@umn.edu> Thu, Sep 15, 2016 at 9:51 AM
To: bovor002@umn.edu

TO : chri1614@umn.edu, bovor002@umn.edu,

The IRB: Human Subjects Committee determined that the referenced study is exempt from review under federal guidelines 45 CFR Part 46.101(b) category #2 SURVEYS/INTERVIEWS; STANDARDIZED EDUCATIONAL TESTS; OBSERVATION OF PUBLIC BEHAVIOR.

Study Number: 1607E91001

Principal Investigator: Witsinee Bovornusvakool

Title(s):
Cultural Intelligence in Thailand: An examination of its antecedents and consequences.

This e-mail confirmation is your official University of Minnesota HRPP notification of exemption from full committee review. You will not receive a hard copy or letter.

This secure electronic notification between password protected authentications has been deemed by the University of Minnesota to constitute a legal signature.

The study number above is assigned to your research. That number and the title of your study must be used in all communication with the IRB office.

Research that involves observation can be approved under this category without obtaining consent.

SURVEY OR INTERVIEW RESEARCH APPROVED AS EXEMPT UNDER THIS CATEGORY IS LIMITED TO ADULT SUBJECTS.

This exemption is valid for five years from the date of this correspondence and will be filed inactive at that time. You will receive a notification prior to inactivation. If this research will extend beyond five years, you must submit a new application to the IRB before the study's expiration date. Please inform the IRB when you intend to close this study.

Upon receipt of this email, you may begin your research. If you have questions, please call the IRB office at (612) 626-5654.

You may go to the View Completed section of eResearch Central at http://eresearch.umn.edu/ to view further details on your study.

The IRB wishes you success with this research.

We value your feedback. We have created a short survey that will only take a couple of minutes to complete. The

questions are basic, but your responses will provide us with insight regarding what we do well and areas that may need improvement. Thanks in advance for completing the survey. http://tinyurl.com/exempt-survey